

DAM FULL SUPPLY LEVEL (FSL) INVESTIGATIONS SEQWATER GATED STORAGES

INTRODUCTION

The following short paper examines the issues associated with temporary lowering the full supply levels of Seqwater's gated dams to improve short term flood mitigation benefits. The paper considers Wivenhoe Dam, Somerset Dam, North Pine Dam and Leslie Harrison Dam.

WIVENHOE DAM AND SOMERSET DAM

Wivenhoe Dam and Somerset dam control only 50% of the Brisbane River catchment (Bremer River and Lockyer Creek catchments are not controlled), therefore the Flood Mitigation benefits provided by the dam will depend on the rainfall distribution experienced during a flood event. This makes it difficult to quantify exactly the benefits of lowering the storage in anticipation of possible flood rains.

There are primarily two types of flood events that may occur in the Brisbane River Catchment. There are the smaller events that impact primarily on the rural bridges upstream of Moggill and the larger events that impact on urban areas in Brisbane. The threshold that separates these two events is a river flow of around 3500 cubic metres per second at Moggill. To understand the possible benefits of lowering the storage to reduce flooding impacts, it makes sense to discuss these two types of events separately.

Events Impacting on Bridges (Moggill Flow < 3500m³/s) – Limited Urban Impacts

In recent history, flood events of this nature occurred in April 1989, February 1999 and October 2010. The flow characteristics of events of this type are shown in the following table.

Event	Wivenhoe Dam					
	Starting Level		Volume Of Inflow	Volume Of Outflow	Peak Outflow	Peak Water Level
	m AHD	%	ML	ML	m ³ /s	m AHD
Early April 1989	67.06	>100	690,000	690,000	1,620	69.78
Late April 1989	67.00	100	870,000	820,000	1,490	71.45
February 1999	63.92	<100	1,220,000	900,600	1,800	70.45
October 2010	67.03	>100	640,000	640,000	1,300	69.65

The October 2010 event was examined to determine the benefits of lowering the storage level. This event commenced with the dam at FSL. The event was examined with the dam at 95% capacity, 90% capacity, 80% capacity, 50% capacity and empty at the commencement of the event. The results are shown in the following table. When reading the table it is important to understand that the bridges are impacted not just by outflows from Wivenhoe, but also by flows from the uncontrolled areas of the river catchment. Accordingly, the location of a bridge within the system will dictate the size of catchment area that will impact on the bridge. All inundation times shown in the table are approximations only, made for the purposes of this investigation.

Dam Percentage Full at Event Commencement	Approximate Duration of Wivenhoe Radial Gate Releases/ Twin Bridges Inundation (hours)	Approximate Duration of Savages Crossing and Colleges Crossing Inundation (hours)	Approximate Duration of Burtons Bridge and Kholo Bridge Inundation (hours)	Peak Flow at Moggill (m ³ /s)
100%	230	247	183	1848
95%	187	214	183	1848
90%	185	214	183	1841
80%	172	214	183	1786
50%	130	214	153	1722
0%	0	189	38	940

The table shows that the reduction in FSL won't have a large impact on Bridge inundation times. A reduction in the order of 36 hours or 15% of the total inundation time may be possible for the low level bridges only. The reductions are generally caused by the delay in release commencement associated with the lower starting FSL. However, the bridges can often already be inundated at this time anyway due to flood inflows into the Brisbane River from the 50% of the catchment not controlled by Wivenhoe Dam. Lowering the FSL of the dam has no impact on such inundations as shown in the table.

For events smaller than those considered above, it should be noted that the Manual of Flood Mitigation allows a trigger level buffer of 27500 megalitres above FSL and this has the effect of protecting Twin Bridges and the lower level bridges from inundation as a result of minor events. Twin Bridges is essentially a low level causeway that is inundated following any radial gate release. This inundation could possibly be prevented by raising the bridge deck level. Regardless, the areas accessed using this bridge can also be accessed using the Fernvale Bridge. It is acknowledged however that the closing of Twin Bridges causes inconvenience to local residents, as it adds approximately another five kilometres to the journeys to and from their residences. Approximately 40 residences and several businesses (primarily turf farms) are impacted.

Events Impacting on Urban Areas (Moggill Flow > 3500m³/s) – All rural bridges inundated

Events of this nature have not been experienced since the construction of Wivenhoe Dam was completed in 1984, with the last event of this nature being experienced in 1974. The inflow volume into Wivenhoe Dam associated with the 1974 event has been estimated to be in the order of 1.5 million megalitres. However during the 1974 event, an additional 1.5 million megalitres of flood flow impacting of the urban areas of Brisbane originated from catchment areas that are not controlled by Wivenhoe Dam.

For events of this nature, it is unlikely that peak water levels in Brisbane would be significantly impacted by minor reductions in the level of Wivenhoe Dam. Certainly reductions in dam volume in the order of at least 250000 megalitres would be needed to provide any significant reduction in water level peaks experienced in urban areas. Additionally, reductions in the FSL of this order would not necessarily guarantee reductions

in urban flood levels, as the effectiveness of Wivenhoe Dam in reducing urban flood levels is directly dependant on the distribution of rainfall in the Brisbane River catchment during a flood event (Wivenhoe Dam controls only 50% of the total Brisbane River catchment) and the spacing between individual flood events.

NORTH PINE DAM

North Pine Dam has no flood mitigation potential. Unlike Wivenhoe Dam, once the dam has reached FSL, all water flows into the dam must be released to protect the structural safety of the dam.

Any radial gate operation at North Pine Dam to release flood water, results in inundation of Youngs Crossing Road, so lowering the FSL is problematic and may best be achieved by increasing the daily water diversion to the North Pine Dam Water Treatment Plant. There are river release valves that allow some water to be drained from North Pine Dam without inundating Youngs Crossing. These valves have been operated continuously since the recent gate releases to manage residual inflows into the dam. However outflows from these valves are restricted to flows in the order of several hundred megalitres per day as larger flows will adversely impact on Youngs Crossing. Certainly a small reduction in the level of North Pine Dam is potentially beneficial in preventing closures of Youngs Crossing Road associated with small storm events.

It should be noted however that Youngs Crossing Road is also impacted by uncontrolled flood flows from Lake Kurwongbah and local storm run-off. In recent times Youngs Crossing Road has been closed by flood water during times when no water releases were being made from North Pine Dam, but when storm rains resulted in flood flows from uncontrolled areas of the catchment.

The table below gives an indication of the rainfall required to operate for NPD:

Level	Capacity			Rainfall Required to Operate	
				Wet Conditions	Dry Conditions
	m AHD	%	ML	mm	mm
FSL	39.60	100.0%	214,302	5	60
Reduced FSL	39.10	95.0%	203,618	35	100

Recent changes to the Manual of Flood Mitigation for North Pine Dam allows for some ability to retain up to 2500 megalitres of water to reduce impacts on Youngs Crossing Road, provided favourable weather forecasts are experienced. However the preferred option to reduce public inconvenience associated with storm events would be to raise the flood immunity of the river crossing on Youngs Crossing Road. This crossing is primarily a low level causeway that is potentially unsuitable given the volume of traffic that now uses this crossing on a daily basis.

LESLIE HARRISON DAM

Similar to North Pine Dam, Leslie Harrison Dam has no flood mitigation potential. Once the dam has reached FSL, all water flows into the dam must be released to protect the structural safety of the dam.

The dam is relatively small with a total full supply storage volume of only 24800 megalitres, against an inflow volume during a 72 hour 1 in 50 year storm event of over 30000 megalitres. Flood gate operations at Leslie Harrison Dam do not impact on public roads and generally only inconvenience the general public during large flood events. Reductions in this inconvenience cannot be achieved by small reductions in dam storage

From: Peter McManamon [REDACTED]
Sent: Saturday, 15 January 2011 8:55 AM
To: Bradley John
Cc: [REDACTED]
Subject: FW: QUU Sitrep #16
Follow Up Flag: Follow up
Flag Status: Completed
Attachments: 20110115_Executive_Summary_sitrep_16[1].doc; 20110115_Sitrep_16__Extreme_wet_weather [1].doc

John

Barry asked me to send you a copy of QUU's management SitRep Report as received this morning.

I will arrange for updating as soon as practicable and on availability of information.

Peter



Peter McManamon
 Chief Executive Officer

[REDACTED]
 Level 5, 200 Creek Street | PO Box 1045 | Spring Hill Qld
 4004

W

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From: Brett Spink [REDACTED]
Sent: Saturday, 15 January 2011 8:48 AM
To: Peter McManamon
Subject: QUU Sitrep #16

FYI

Brett Spink
 Risk Program Manager
 SEQ Water Grid Manager

Ph: [REDACTED]
 Email: [REDACTED]
 Post: PO Box 16205, BRISBANE CITY EAST, QLD 4002
 Visit: Level 15, 53 Albert St, BRISBANE
 ABN: 14 783 317 630

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Queensland Urban Utilities UPDATE 5am Saturday 15/1/2011

EVENT SUMMARY – SITREP 16

Status of water and sewerage assets and services

The following is a summary of current and forecast impacts, based on flood modelling.

Brisbane City Council area (as at 4.30am)

Water:

- All water pumping stations operational (one with generator set).
- Two properties without water (due to main burst).

Wastewater:

- 48 sewerage pumping stations flooded or without power.
- Major wastewater treatment plants have flooded are not operating (Karana Downs, Oxley, Fairfield, Wacol).
- No impact on residents.

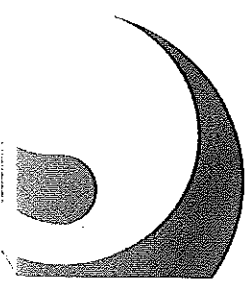
Ipswich City Council area

Disruption to some telemetry and site communications equipment resulting in the need for physical site fault assessment.

Water: Initial reports indicate no operational problems. Water sampling commenced west of Ipswich.

Wastewater:

- Two wastewater treatment plants are offline – Bundamba and Goodna.
- 28 sewerage pumping stations are not operating.
- No impact on residents is expected.



Lockyer Valley**Water:**

- All reservoirs intact.
- Working with Seqwater and Water Grid Manager to restore supplies. Bottled water being flown and trucked in.
- Two water pumping stations offline - Helidon (damaged), Postman's Ridge (a generator set is on site and it will be operational today)
- Laidley and Forest Hill have two days supply.
- Gatton has received 350kl of water by tanker.
- Repairing the road for tanker access into Helidon.
- Unable to access Withcott and power is down to the area. Repair to supply main has commenced.
- Regency Downs/Kensington Grove reliant on water tankers to provide supply.

Wastewater:

- All water reclamation plants operational.
- Repairs have commenced to Main Sewer Rising Main to Gatton, which washed away.
- Further investigation as water recedes.

Scenic Rim

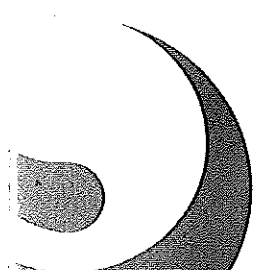
Water and wastewater: No issues

Somerset**Water:**

- Diesel pump and piping installed at Lowood WTP and testing continues. Should be operational by early morning.
- Working with Seqwater and Water Grid Manager to restore supplies. Bottled water being flown and trucked in.
- Esk and Toogoolawah WTPs will return to normal operation status by later today.
- Minden reliant on bottled water.
- Power restored to Linville PS and water is being delivered to the reservoir.
- Lowood and Fernvale still in supply but reliant on water tankers to maintain current levels.

Wastewater:

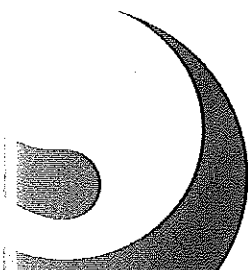
- Esk, Fernvale, Lowood and Toogoolawah WTPs not serviceable.



LOCKYER VALLEY WATER ASSETS STATUS

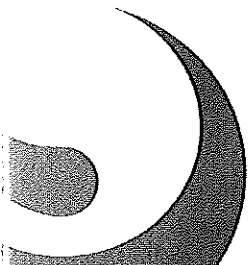
Updated – 5:00AM Saturday, 15 January 2011

RESERVOIR/PS	LOCATION	CAPACITY (ML)	HOLDING (%)	EST SERVICE DURATION	SERVICE (Y/N)	NOTES	Status
Plainlands	Plainlands	5	55		Y		
Victoria St	Forest Hill	0.18	60	2 days	Y		
Summer St Boosted zone, pump station and reservoir	Laidley	1.12	100	2 days	Y		Consideration of System Isolation
Douglas McInnes Drive		1.14	80		Y		
Rosewood Laidley Road Reservoir		0.45	100		Y	Can backfeed into town	
Sippel Road (Lakes Estate)		0.09	80		Y	Trickle feed to tanks	
Glenore Grove Booster							damaged fencing, switchboard ok, not critical for supply
Gatton Reservoir - low	Woodlands Rd	5.95	0.24ML		Y		
Gatton Reservoir - high	Woodlands Rd	0.24			Y		
Gatton Reservoir - low	Cochrane St	2	0.06ML		Y		<ul style="list-style-type: none">Fencing washed awaylightning strike
							<ul style="list-style-type: none">telemetry & local control damaged (not sure of this or below)
Gatton Reservoir -	Cochrane St	2			Y		<ul style="list-style-type: none">Fencing washed awaylightning strike



high							<ul style="list-style-type: none"> telemetry & local control damaged (not sure of this or above)
Gatton PS		N/A					Networked water supply unavailable
Helidon - Small	Seventeen Mile Road	0.7	0				Networked water supply unavailable
Helidon - Large	Seventeen Mile Road	1.5	0				
Millora Rd (Dobel Dr)		0.18	5		Y		
Pump Station	Rossiter Rd	N/A					
Warrego Hwy PS		N/A				Pump Motor and Switchboard being replaced. Genset on site until 16/1	WASHED AWAY
Postmans Ridge Reservoir	Murphy's Creek Ridge	0.33	50				<ul style="list-style-type: none"> 200mm trunk supply line damaged Switchboard damaged
Postmans Ridge PS	Murphy's Creek Ridge	N/A					Genset onsite 14/01/2011
Withcott	Dolley's Rd	1.94	0			No inlet feed available due to break on 200mm DICI inlet main after pump station at Postman's Ridge. Both ends isolated. Postmans Ridge Pump Station is flooded and inoperable.	Networked water supply unavailable
Withcott PS		N/A					
Tabletop	Berghoffer Rd	0.003	25		Y		
Tabletop PS					Y		

Please note: Details in this table are based on the latest information at time of publication. Due to the changing nature of the situation this table will be updated regularly.



LOCKYER VALLEY WASTEWATER STATUS

Updated – 5:00AM Saturday, 15 January 2011

ASSET	LOCATION	STATUS	NOTES
Railway St WRP	Forest Hill	Y	
Gordon St PS	Forest Hill	Y	
Railway St PS	Forest Hill	Y	
Treatment Plant Rd WRP	Gatton		
Crescent St PS	Gatton	Y	
East St PS	Gatton	Y	
Myler Crt PS	Gatton	Y	
Lake Apex PS	Gatton		
Industrial Rd PS	Gatton		
South St PS	Gatton	Y	Operational
Karrash Road	UNK	Y	Damaged Pump
Hennessy St PS	Gatton	Y	
Golf Links Dve PS	Gatton	Y	
Western Dve PS	Gatton	Y	Telemetry damaged - condition not determined
Tew Crt PS	Gatton	Y	
Back Flagstone Creek Rd WRP	Helidon		No power. Generator organised.
Airforce Rd PS	Helidon	Y	
Lawlers Rd PS	Helidon	Y	
Plant St PS	Helidon		
Boundary Rd WRP	Laidley		
Kurrajong Crt PS	Laidley	Y	
Stanford Pl PS	Laidley	Y	
Boundary Rd PS	Laidley		
Hayes St PS	Laidley	Y	
Alexander St PS	Laidley		
Pike St PS	Laidley	Y	Operational but no road access

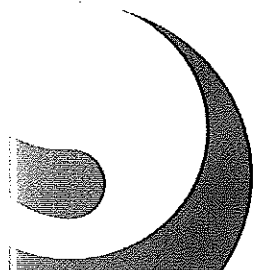
Patrick St PS	Laidley		Operational but no road access
Pioneer St PS	Laidley		
Storr St PS	Laidley		
Vaux St PS	Laidley		

WATER RECLAMATION PLANT	NOTES
Gatton WRP	Operational and Accessible
Laidley WRP	Operational and Accessible
Forest Hill WRP	Operational and Accessible
Carole Park Reclamation Pant	Not accessible but Operational

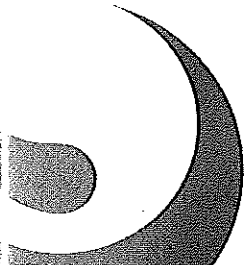
SOMERSET WATER ASSETS STATUS

Updated – 5:00AM Saturday, 15 January 2011

RESERVOIR/P	LOCATION	CAPACITY (ML)	HOLDING (%)	EST SERVICE DURATION	SERVICEABLE (Y/N)	NOTES
Lowood 1	Jacqueline St Res 2	3			Y	Level is Critically Low but being maintained due to reliance on tankers
Lowood 2	Glamorgan Vale Rd / Ziebell	2			Y	
Lowood 3	Acacia St	1.13			Y	
Tarampa	Prenzlau Rd	0.022				
Fernvale	Knox Rd	2	EMPTY	-	Y	Level is Critically Low but being maintained due to reliance on tankers
Balance tank/P	Fernvale	UNK				
Lowood West		3				Networked water supply unavailable
Plainslands		5				
Pump Station & Reservoir	Summer St	1.12				
Wilson Estate	Douglas McInness Dr	1.14				
Forest Hill	Victoria St	0.18				
Lakes Estate	Sippel Rd	0.09				
Brown Cres PS		N/A				
Laidley Rd	Laidley Rd	0.45				
Reservoir - low	Woodlands Rd	5.95				
Reservoir - high	Woodlands Rd	0.24				
Pump Station	Rossiter Rd	N/A				
Warrego Hwy PS		N/A				
Esk		1.1 ML	0.4		Y	To return to normal status 14/1 afternoon
BP	East St	N/A				45kW soft start – 18l/s max
Toogoolawah		2	0.5		Y	To return to normal status 14/1 afternoon
Kilcoy	Saleyards Rd	3.6	?	1 day	Y	(Source: WGM)



						3 tanks – 0.45, 0.63 & 1.8 ML
Jimna			65	2 days	Y	(Source: WGM)
Linville		0.1	50	2 days	Y	Incorrect SCADA reading at Lowood. Manually checked (Source: WGM)



SOMERSET WASTEWATER ASSETS STATUS

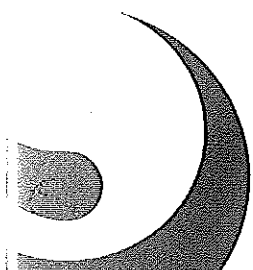
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WATER RECLAMATION PLANT	PREVIOUS NOTES	CURRENT STATUS
Esk WRP	Was inundated, Now accessible	Not Serviceable – No Further Information available
Fernvale WRP	Not Accessible	Not Serviceable – No Further Information available
Lowood WRP	Was inundated, Now accessible	Not Serviceable – No Further Information available
Kilcoy WRP	Not Accessible	Power Restored
Toogoolawah WRP	Normal Operation	Not Serviceable – No Further Information available

SCENIC RIM AREA STATUS

Updated – 5:00AM Saturday, 15 January 2011

NO ISSUES



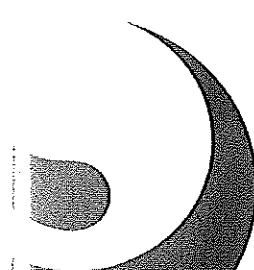
BRISBANE AREA WATER ASSETS SUMMARY

Updated – 5:00AM Saturday, 15 January 2011

Asset Type	Number	Last Updated	
Telemetry	2	14/01/2011	4:00
Water Pump Stations & Boosters		14/01/2011	4:00
Flooded or Without Power	1		
Customers Affected	0		
Res Levels (ML)	65.53	14/01/2011	4:00
Water Main Bursts	3	14/01/2011	4:00
Properties Affected	2		
PRV's	5	14/01/2011	4:00
Trunk Mains	1	14/01/2011	4:00
Dirty Water Incidents	8	14/01/2011	4:00

QUU RESERVOIRS – TIME TILL LOW LEVEL

Status	Code
More Than 5 hours supply	
Between 3 and 5 hours supply	
Less than 3 hours supply	



Location	Current Volume (ML)	Usable Volume (ML)	Current Level (m)	Est ROF Time to Low (Hrs)
Mt. Gravatt	5.74	1.14	2.37	6.54
Roles Hill 1 - Decommissioned	1.50	0.74	1.18	
Nathan - Offline	0.00	0.00	0.00	
Outlook	0.18	0.14	1.30	32.48
Grovely 2	3.99	2.60	3.46	12.30
Toohey Mt 2	2.55	1.57	3.12	34.16
Karana Downs R60M	0.20	0.00	0.49	0.88
Bracken Ridge	5.23	3.65	2.65	7.85
Highgate Hill 1	2.01	1.00	1.56	6.92
Inala	5.19	2.90	3.40	46.99
Bartleys Hill 1	5.29	2.33	3.85	16.06
Bardon Hill	1.42	0.83	1.91	19.64
Milne Hill	6.10	2.45	4.09	6.26
Highgate Hill 2	1.81	0.81	1.41	5.97
Grovely 1	1.45	0.87	2.51	13.46
The Gap	6.95	3.78	7.01	38.72
Tarragindi	35.48	16.64	3.87	14.66
Holland Park 2	3.69	2.89	5.05	18.97
Richlands	5.15	2.54	10.25	7.06
Mt Ommaney	14.45	5.32	4.76	14.50
Manly Elevated	5.81	0.17	24.70	2.08
Karana Downs R60M	0.93	0.12	2.31	3.42
Mitchelton	0.73	0.32	1.17	20.64
Stafford 2	2.44	1.61	2.02	7.49
Karawatha	1.79	0.89	3.54	4.96
Holland Park 1	0.95	0.61	5.23	16.21
Bartleys Hill 2	8.42	3.57	4.18	16.16
Roles Hill 2	5.51	0.61	3.42	8.99
Boss Rd WP30	15.26	4.36	6.72	19.65
The Summit	0.22	0.04	3.37	16.24
Boss Rd WP30	0.12	0.01	5.61	1.15
Toohey Mt 1	1.12	0.72	2.24	21.62
Manly Tank	0.40	0.02	5.22	0.64
Chapel Hill	0.93	0.27	0.93	4.36
Stafford 1	0.00	0.00	0.00	0.00
Eildon Hill - Offline	0.04	0.00	0.01	
Total Volume		65.53		

BRISBANE AREA WASTEWATER ASSETS SUMMARY

Updated – 5:00AM Saturday, 15 January 2011

48	Pump Stations Flooded or without power	11	Generators Flooded
3	Treatment Plant Flooded or without power	0	Generators Flooded

IPSWICH WATER ASSETS SUMMARY

Updated - 5:00AM Saturday 15 January 2011

PUMP STATION	LOCATION	SERVICEABLE	POWER	STATUS
Bundamba 1 Catchment				
Brisbane Terrace				n/a
Francis Street				Operational
Moggill Ferry				Not Flooded
Tantivity				Not Flooded
Moore's Pocket				Flooded
Karalee A				Not Flooded
Karalee B				Not Flooded
Mt Crosby				Not Flooded
Harris Street				Operational
Harrison street				Operational
Enterprise Street				Operational
Rosebery Prade				Not Flooded
Woodend Road				Not Flooded
Haig Street				Operational
Tiger Street				Not Flooded
Tivoli Wastewater Centre				Not Flooded
Luckie Crescent				Operational
Boundary Street North				Not Flooded
Boundary Street south				Not Flooded
Blackall Street				Not Flooded
Chermside Road (Major Station)				Not Flooded
Bundamba 2 Catchment				
Samford Road				Not Flooded
Chalk Street				Operational
Old Toowoomba Road				Not Flooded
Ivor Marsden				Not Flooded
Okeefe				Operational
Hanlon Street				Flooded
Lobb Street				Not Flooded
Lobley Street				Not Flooded
Sutton Street				Not Flooded

Berry Street				Operational
Winston Street				Operational
Hall Street				Operational
Saleyard Road				Operational
Videroni Street				Not Flooded
Queen Street				Operational
Ashburn Road				Not Flooded
Bognuda Street				Not Flooded
Hudson Street				Operational
Kenneth Street				Not Flooded
Nelson Street				Operational
Carole Park Catchment				
Cobalt Street				Operational
Goodna Catchment				
Brisbane Terrace (Major Station)				Not Flooded
Riverview Road				Operational
Monash Street				Not Flooded
Six Mile Creek				Not Flooded
Cedar Road				Operational
Eagle Heights				Operational
McAuliffe Street				Not Flooded
Lower Cross Street				Not Flooded
Keidges Road				Operational
Butterfly Green				Operational
Springfield Collage Green				Operational
Waterford Road				Operational
Fiona Street				Operational
West Street				Operational
Rosewood Catchment				
School Street				Operational
Bassetts Lane				Operational

IPSWICH WASTEWATER ASSETS SUMMARY

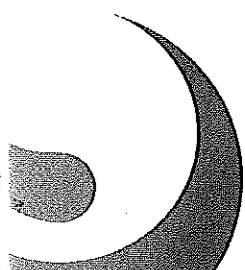
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2	Pump Stations Under Water
55	Pump Stations Above water

3	WRPs Under Water
1	WRPs Above Water

Condition	No. Pump Stations
Normal Operation	27
Inundated but accessible	
Inundated / not accessible	2

WATER RECLAMATION PLANT	NOTES
Bundamba Water Reclamation Plant	Inaccessible and Inundated
Goodna Reclamation Plant	Inaccessible and Inundated
Rosewood Reclamation Plant	Inaccessible and Inundated
Carole Park Reclamation Pant	Normal Operation



From: Barry Dennien [REDACTED]
Sent: Saturday, 15 January 2011 9:28 AM
To: Bradley John
Subject: Fwd: Teleconference 7:30am 15 Jan Minutes

John

This a more useful summary

Regards
 Barry Dennien

Begin forwarded message:

From: [REDACTED]
Date: 15 January 2011 9:14:49 AM AEST
To: Barry Dennien [REDACTED]
Subject: Teleconference 7:30am 15 Jan Minutes

Lowood and isolated town ship

Water treatment plant flow now at of 140 litres/second established at 5:00am. Clear water balance tank at 7% and increasing. Five QUU teams working the trunk distribution lines to fix issues. Additional 5 teams from Allconnex Water also currently being deployed to address any additional trunk leaks.

Boiled water notice still in place for Locker Valley with a requirement that the messaging relating to this is reinforced in the affected areas at QH request

Bottled water and tankers to town ships being supplied by QUU meeting current demands can meet the 3 litres per day per person. Councils having issues distributing.

Withcott mains a major issue with a couple of days required to resolve the issues

QUU requested assistance with QPS approval to check Gatton to Helliden pipeline running through Grantham which is a designated crime scene. Scott Denner to follow up.

Production

Mt Crosby East Bank 228ML (Water Quality 0.08NTU)

Mt Crosby West Bank 232ML (Water Quality 0.05NTU)

North Pine and NPI 100ML

SRWP 100ML

Total 660ML production

Estimated demand approx 520-550ML

Unity water requested supply to be increased from 300Litres to 400Litres per second will be reviewed at 12:00pm update meeting

Production Water Balance Review Meeting scheduled for 12:00 to confirm production, supply and demand

Concentrating on ensuring reservoirs to support Yeronga and Fairfield

Karana Downs usage high will need to keep supply to this location to meet high demand

Chemical Delivery

Access to East and West bank now confirmed Caustic and Hypo now being delivered to meet demand

Clean up

PRW Approved for use for clean down for tankers by OWSR and QH

Staged notification for tankers, fire brigade and Main Roads and Transport to fill from the

PRW charge points being followed up by WaterSecure.

UnityWater seeking permission to use class A+ for clean-up Paul Burrell and QH covering the approvals

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Queensland Urban Utilities UPDATE 5am Saturday 15/1/2011

EVENT SUMMARY – SITREP 16

Status of water and sewerage assets and services

The following is a summary of current and forecast impacts, based on flood modelling.

Brisbane City Council area (as at 4.30am)

Water:

- All water pumping stations operational (one with generator set).
- Two properties without water (due to main burst).

Wastewater:

- 48 sewerage pumping stations flooded or without power.
- Major wastewater treatment plants have flooded are not operating (Karana Downs, Oxley, Fairfield, Wacol).
- No impact on residents.

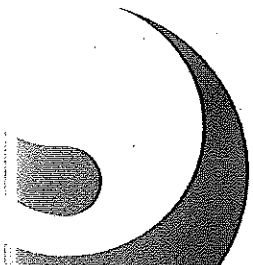
Ipswich City Council area

Disruption to some telemetry and site communications equipment resulting in the need for physical site fault assessment.

Water: Initial reports indicate no operational problems. Water sampling commenced west of Ipswich.

Wastewater:

- Two wastewater treatment plants are offline – Bundamba and Goodna.
- 28 sewerage pumping stations are not operating.
- No impact on residents is expected.



Lockyer Valley

Water:

- All reservoirs intact.
- Working with Seqwater and Water Grid Manager to restore supplies. Bottled water being flown and trucked in.
- Two water pumping stations offline - Helidon (damaged), Postman's Ridge (a generator set is on site and it will be operational today)
- Laidley and Forest Hill have two days supply.
- Gatton has received 350kl of water by tanker.
- Repairing the road for tanker access into Helidon.
- Unable to access Withcott and power is down to the area. Repair to supply main has commenced.
- Regency Downs/Kensington Grove reliant on water tankers to provide supply.

Wastewater:

- All water reclamation plants operational.
- Repairs have commenced to Main Sewer Rising Main to Gatton, which washed away.
- Further investigation as water recedes.

Scenic Rim

Water and wastewater: No issues

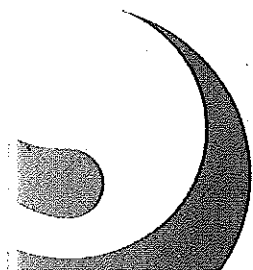
Somerset

Water:

- Diesel pump and piping installed at Lowood WTP and testing continues. Should be operational by early morning.
- Working with Seqwater and Water Grid Manager to restore supplies. Bottled water being flown and trucked in.
- Esk and Toogoolawah WTPs will return to normal operation status by later today.
- Minden reliant on bottled water.
- Power restored to Linville PS and water is being delivered to the reservoir.
- Lowood and Fernvale still in supply but reliant on water tankers to maintain current levels.

Wastewater:

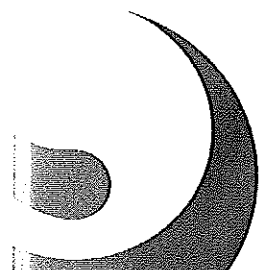
- Esk, Fernvale, Lowood and Toogoolawah WRPs not serviceable.



LOCKYER VALLEY WATER ASSETS STATUS

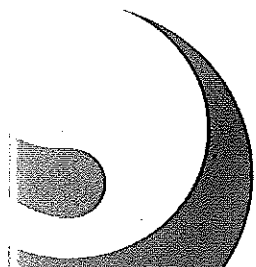
Updated – 5:00AM Saturday, 15 January 2011

RESERVOIR/PS	LOCATION	CAPACITY (ML)	HOLDING (%)	EST SERVICE DURATION	SERVICE (Y/N)	NOTES	Status
Plainlands	Plainlands	5	55		Y		
Victoria St	Forest Hill	0.18	60	2 days	Y		
Summer St Flooded zone, pump station and reservoir	Laidley	1.12	100	2 days	Y		Consideration of System Isolation
Douglas McInnes Drive		1.14	80		Y		
Rosewood Laidley Road Reservoir		0.45	100		Y	Can backfeed into town	
Sippel Road (Lakes Estate)		0.09	80		Y	Trickle feed to tanks	
Glenore Grove Booster							damaged fencing, switchboard ok, not critical for supply
Gatton Reservoir - low	Woodlands Rd	5.95	0.24ML		Y		
Gatton Reservoir - high	Woodlands Rd	0.24			Y		
Gatton Reservoir - low	Cochrane St	2	0.06ML		Y		<ul style="list-style-type: none"> Fencing washed away lightning strike telemetry & local control damaged (not sure of this or below)
Gatton Reservoir -	Cochrane St	2			Y		<ul style="list-style-type: none"> Fencing washed away lightning strike



high							telemetry & local control damaged (not sure of this or above)
Gatton PS		N/A					Networked water supply unavailable
Helidon - Small	Seventeen Mile Road	0.7	0				Networked water supply unavailable
Helidon - Large	Seventeen Mile Road	1.5	0				Networked water supply unavailable
Millora Rd (Dobel Dr)		0.18	5		Y		
Pump Station	Rossiter Rd	N/A					
Warrego Hwy PS		N/A				Pump Motor and Switchboard being replaced. Genset on site until 16/1	WASHED AWAY
Postmans Ridge Reservoir	Murphy's Creek Ridge	0.33	50				<ul style="list-style-type: none"> 200mm trunk supply line damaged Switchboard damaged
Postmans Ridge PS	Murphy's Creek Ridge	N/A					Genset onsite 14/01/2011
Withcott	Dolley's Rd	1.94	0			No Inlet feed available due to break on 200mm DCL inlet main after pump station at Postman's Ridge. Both ends isolated. Postmans Ridge Pump Station is flooded and inoperable.	Networked water supply unavailable
Withcott PS		N/A					
Tabletop	Berghoffer Rd	0.003	25		Y		
Tabletop PS					Y		

Please note: Details in this table are based on the latest information at time of publication. Due to the changing nature of the situation this table will be updated regularly.



LOCKYER VALLEY WASTEWATER STATUS

Updated – 5:00AM Saturday, 15 January 2011

ASSET	LOCATION	STATUS	NOTES
Railway St WRP	Forest Hill	Y	
Gordon St PS	Forest Hill	Y	
Railway St PS	Forest Hill	Y	
Treatment Plant Rd WRP	Gatton		
Crescent St PS	Gatton	Y	
East St PS	Gatton	Y	
Myler Crt PS	Gatton	Y	
Lake Apex PS	Gatton		
Industrial Rd PS	Gatton		
South St PS	Gatton	Y	Operational
Karrash Road	UNK	Y	Damaged Pump
Hennessy St PS	Gatton	Y	
Golf Links Dve PS	Gatton	Y	
Western Dve PS	Gatton	Y	Telemetry damaged - condition not determined
Tew Crt PS	Gatton	Y	
Back Flagstone Creek Rd WRP	Helidon		No power. Generator organised.
Airforce Rd PS	Helidon	Y	
Lawlers Rd PS	Helidon	Y	
Plant St PS	Helidon		
Boundary Rd WRP	Laidley		
Kurrajong Crt PS	Laidley	Y	
Stanford Pl PS	Laidley	Y	
Boundary Rd PS	Laidley		
Hayes St PS	Laidley	Y	
Alexander St PS	Laidley		
Pike St PS	Laidley	Y	Operational but no road access

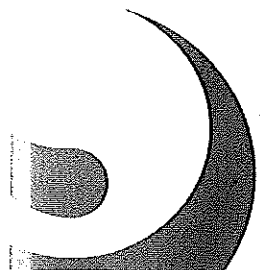
Patrick St PS	Laidley		Operational but no road access
Pioneer St PS	Laidley		
Storr St PS	Laidley		
Vaux St PS	Laidley		

WATER RECLAMATION PLANT	NOTES
Gatton WRP	Operational and Accessible
Laidley WRP	Operational and Accessible
Forest Hill WRP	Operational and Accessible
Carole Park Reclamation Pant	Not accessible but Operational

SOMERSET WATER ASSETS STATUS

Updated – 5:00AM Saturday, 15 January 2011

RESERVOIR/P	LOCATION	CAPACITY (ML)	HOLDING (%)	EST SERVICE DURATION	SERVICEABLE (Y/N)	NOTES
Lowood 1	Jacqueline St Res 2	3			Y	Level is Critically Low but being maintained due to reliance on tankers
Lowood 2	Glamorgan Vale Rd / Ziebell	2			Y	
Lowood 3	Acacia St	1.13			Y	
Tarampa	Prenzlau Rd	0.022				
Fernvale	Knox Rd	2	EMPTY	-	Y	Level is Critically Low but being maintained due to reliance on tankers
Balance tank/P	Fernvale	UNK				
Lowood West		3				Networked water supply unavailable
Plainslands		5				
Pump Station & Reservoir	Summer St	1.12				
Wilson Estate	Douglas McInness Dr	1.14				
Forest Hill	Victoria St	0.18				
Lakes Estate	Sippel Rd	0.09				
Brown Cres PS		N/A				
Laidley Rd	Laidley Rd	0.45				
Reservoir - low	Woodlands Rd	5.95				
Reservoir - high	Woodlands Rd	0.24				
Pump Station	Rossiter Rd	N/A				
Warrego Hwy PS		N/A				
Esk		1.1 ML	0.4		Y	To return to normal status 14/1 afternoon
BP	East St	N/A				45kW soft start – 18l/s max
Toogoolawah		2	0.5		Y	To return to normal status 14/1 afternoon
Kilcoy	Saleyards Rd	3.6	?	1 day	Y	(Source: WGM)



						3 tanks – 0.45, 0.63 & 1.8 ML
Jimna			65	2 days	Y	(Source: WGM)
Linville		0.1	50	2 days	Y	Incorrect SCADA reading at Lowood. Manually checked (Source: WGM)

SOMERSET WASTEWATER ASSETS STATUS

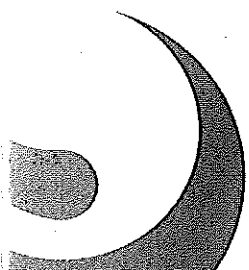
Updated – 5:00AM Saturday, 15 January 2011

WATER RECLAMATION PLANT	PREVIOUS NOTES	CURRENT STATUS
Esk WRP	Was inundated, Now accessible	Not Serviceable – No Further Information available
Fernvale WRP	Not Accessible	Not Serviceable – No Further Information available
Lowood WRP	Was inundated, Now accessible	Not Serviceable – No Further Information available
Kilcoy WRP	Not Accessible	Power Restored
Toogoolawah WRP	Normal Operation	Not Serviceable – No Further Information available

SCENIC RIM AREA STATUS

Updated – 5:00AM Saturday, 15 January 2011

NO ISSUES



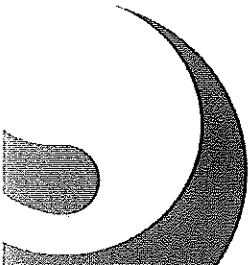
BRISBANE AREA WATER ASSETS SUMMARY

Updated – 5:00AM Saturday, 15 January 2011

Asset Type	Number	Last Updated	
Telemetry	2	14/01/2011	4:00
Water Pump Stations & Boosters		14/01/2011	4:00
Flooded or Without Power	1		
Customers Affected	0		
Res Levels (ML)	65.53	14/01/2011	4:00
Water Main Bursts	3	14/01/2011	4:00
Properties Affected	2		
PRV's	5	14/01/2011	4:00
Trunk Mains	1	14/01/2011	4:00
Dirty Water Incidents	8	14/01/2011	4:00

QUU RESERVOIRS – TIME TILL LOW LEVEL

Status	Code
More Than 5 hours supply	
Between 3 and 5 hours supply	
Less than 3 hours supply	



Location	Current Volume (ML)	Usable Volume (ML)	Current Level (m)	Est ROF Time to Low (Hrs)
Mt. Gravatt	5.74	1.14	2.37	6.54
Roles Hill 1 - Decommissioned	1.50	0.74	1.18	
Nathan - Offline	0.00	0.00	0.00	
Outlook	0.18	0.14	1.30	32.48
Grovely 2	3.99	2.60	3.46	12.30
Toohey Mt 2	2.55	1.57	3.12	34.16
Karana Downs R60M	0.20	0.00	0.49	0.88
Bracken Ridge	5.23	3.65	2.65	7.85
Highgate Hill 1	2.01	1.00	1.56	6.92
Inala	5.19	2.90	3.40	46.99
Bartleys Hill 1	5.29	2.33	3.85	16.06
Bardon Hill	1.42	0.83	1.91	19.64
Milne Hill	6.10	2.45	4.09	6.26
Highgate Hill 2	1.81	0.81	1.41	5.97
Grovely 1	1.45	0.87	2.51	13.46
The Gap	6.95	3.78	7.01	38.72
Tarragindi	35.48	16.64	3.87	14.66
Holland Park 2	3.69	2.89	5.05	18.97
Richlands	5.15	2.54	10.25	7.06
Mt Ommaney	14.45	5.32	4.76	14.50
Manly Elevated	5.81	0.17	24.70	2.08
Karana Downs R60M	0.93	0.12	2.31	3.42
Mitchelton	0.73	0.32	1.17	20.64
Stafford 2	2.44	1.61	2.02	7.49
Karawatha	1.79	0.89	3.54	4.96
Holland Park 1	0.95	0.61	5.23	16.21
Bartleys Hill 2	8.42	3.57	4.18	16.16
Roles Hill 2	5.51	0.61	3.42	8.99
Boss Rd WP30	15.26	4.36	6.72	19.65
The Summit	0.22	0.04	3.37	16.24
Boss Rd WP30	0.12	0.01	5.61	1.15
Toohey Mt 1	1.12	0.72	2.24	21.62
Manly Tank	0.40	0.02	5.22	0.64
Chapel Hill	0.93	0.27	0.93	4.36
Stafford 1	0.00	0.00	0.00	0.00
Eildon Hill - Offline	0.04	0.00	0.01	
Total Volume		65.53		

BRISBANE AREA WASTEWATER ASSETS SUMMARY

Updated – 5:00AM Saturday, 15 January 2011

48	Pump Stations Flooded or without power
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11	Generators Flooded
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3	Treatment Plant Flooded or without power
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0	Generators Flooded
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IPSWICH WATER ASSETS SUMMARY

Updated - 5:00AM Saturday 15 January 2011

PUMP STATION	LOCATION	SERVICEABLE	POWER	STATUS
Bundamba 1 Catchment				
Brisbane Terrace				n/a
Francis Street				Operational
Moggill Ferry				Not Flooded
Tantivity				Not Flooded
Moore's Pocket				Flooded
Karalee A				Not Flooded
Karalee B				Not Flooded
Mt Crosby				Not Flooded
Harris Street				Operational
Harrison street				Operational
Enterprise Street				Operational
Rosebery Prade				Not Flooded
Woodend Road				Not Flooded
Haig Street				Operational
Tiger Street				Not Flooded
Tivoli Wastewater Centre				Not Flooded
Luckie Crescent				Operational
Boundary Street North				Not Flooded
Boundary Street south				Not Flooded
Blackall Street				Not Flooded
Chermside Road (Major Station)				Not Flooded
Bundamba 2 Catchment				
Samford Road				Not Flooded
Chalk Street				Operational
Old Toowoomba Road				Not Flooded
Ivor Marsden				Not Flooded
Okeefe				Operational
Hanlon Street				Flooded
Lobb Street				Not Flooded
Lobley Street				Not Flooded
Sutton Street				Not Flooded

Berry Street				Operational
Winston Street				Operational
Hall Street				Operational
Saleyard Road				Operational
Videroni Street				Not Flooded
Queen Street				Operational
Ashburn Road				Not Flooded
Bognuda Street				Not Flooded
Hudson Street				Operational
Kenneth Street				Not Flooded
Nelson Street				Operational
Carole Park Catchment				
Cobalt Street				Operational
Goodna Catchment				
Brisbane Terrace (Major Station)				Not Flooded
Riverview Road				Operational
Monash Street				Not Flooded
Six Mile Creek				Not Flooded
Cedar Road				Operational
Eagle Heights				Operational
McAuliffe Street				Not Flooded
Lower Cross Street				Not Flooded
Keidges Road				Operational
Butterfly Green				Operational
Springfield Collage Green				Operational
Waterford Road				Operational
Fiona Street				Operational
West Street				Operational
Rosewood Catchment				
School Street				Operational
Bassetts Lane				Operational

IPSWICH WASTEWATER ASSETS SUMMARY

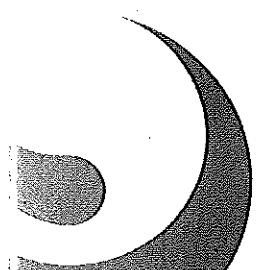
Updated – 5:00AM Saturday, 15 January 2011

2	Pump Stations Under Water
55	Pump Stations Above water

3	WRPs Under Water
1	WRPs Above Water

Condition	No. Pump Stations
Normal Operation	27
Inundated but accessible	
Inundated / not accessible	2

WATER RECLAMATION PLANT	NOTES
Bundamba Water Reclamation Plant	Inaccessible and Inundated
Goodna Reclamation Plant	Inaccessible and Inundated
Rosewood Reclamation Plant	Inaccessible and Inundated
Carole Park Reclamation Plant	Normal Operation



[REDACTED]

From: Geoff Stead [REDACTED]
Sent: Monday, 17 January 2011 1:01 PM
To: Bradley John
Subject: FW: Wivenhoe interviews

John, below is the advice from GMU. I have spoken to Mike Lyons who is checking whether the Australian has called today. Mike also tells me that CM has put Des Houghton on the Wivenhoe story instead of Brian Williams. Des wrote an article last week you may have seen which was extremely critical of the dam management. G

From: Kimberley Gardiner
Sent: Monday, 17 January 2011 12:40 PM
To: Geoff Stead
Cc: Premiers Office - Media Unit; Lauren Sims; Lance McCallum
Subject: RE: Wivenhoe interviews

I am happy for Barry to do interview if requested - let me know if the request comes in (we don't want to feed The Australian's campaign unnecessarily). You would have seen the re-write of the HIB - we need to be sensitive to the fact that there will be an inquiry announced. Cheers Kimberley.

From: Geoff Stead
Sent: Monday, 17 January 2011 12:34 PM
To: Kimberley Gardiner
Cc: Premiers Office - Media Unit; Lauren Sims; Lance McCallum
Subject: Wivenhoe interviews

Kimberley, Minister Robertson is of the view that it would be appropriate for Water Grid's Barry Dennien to chat with Hedley Thomas and Brian Williams and give them a more detail assessment of the operations of Wivenhoe last week including figures that show the inflows were double that of 74, the river heights were much lower and how the release strategy was spot on according to the Manual which was devised by scientific experts. Are you ok with this kind of interview to proceed? Thanks, Geoff

Geoff Stead
Senior Media Advisor
Office of the Hon Stephen Robertson MP
Minister for Natural Resources, Mines and Energy and Trade
P: [REDACTED]
M: [REDACTED]
E: [REDACTED]

[REDACTED]

From: Water Grid Emergency Manager [REDACTED]
Sent: Tuesday, 18 January 2011 7:47 AM
To: Bradley John
Subject: Lowood WTP off line and QUU Sitrep
Attachments: SitRep 26 - Extreme Weather Event - 17.01.11.pdf

Colleagues

attached is the latest QUU SITREP from last night. Please note that this morning at 0417h we received a call from Seqwater advising that the temporary water pump at Lowood WTP was off line. We are expecting an update later this morning on anticipated repair time and any other contingency arrangements.

Follow-up call from QUU at 0505h advising that there is sufficient supply in reservoirs supplied by the Lowood WTP for about 1-2 days.

Seqwater Director Operations is on his way to the site to assess the issues and provide further information on repair time. Once we have this information and have further spoke to QUU we will provide a further update.

If you have any questions please call us on [REDACTED]

Water Grid Emergency Management Team

From: Julie Shanks [REDACTED]
Sent: Tuesday, 18 January 2011 10:19 AM
To: Bradley John
Cc: Hausler Simon
Subject: 1) Lowood WTP 2) Sludge disposal at Mt Crosby
John

Lowood WTP

Information from Jim Pruss (Seqwater Dir Operations) as at 10AM

- Pump is fine but having problems with the hoses
- Need a crane to move the pump closer to the river but road is damaged.
- Working on the issue and still expected to have pump working by lunchtime
- SEQwater (Dave Roberts) is approaching hire companies (Eg Coates) for a high lift pump as a standby in case of ongoing issues.

Information from Rob Sullivan (QUU)

- All Lowood reservoirs have 1-2 days supply

Sludge disposal at Mt Crosby

Information from Jim Pruss (10AM)

- There is a build up of sludge at Mt Crosby that they cannot continue to hold onsite.
- SEQwater are seeking approval to return some of the better quality sludge to the river.
- They are approaching Andrew Connor (DERM) re this issue.

I will ask around if there are other WTPS that are experiencing waste disposal issues

No other information at this stage

Cheers

Barry

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Critical issues

- Lowood WTP offline as at 4.17AM due to temporary pump failure. At 0505am QUU advised there is sufficient supply in reservoirs supplied by the Lowood WTP for about 1-2 days. Seqwater Director Operations is on his way to the site to assess the issues and provide further information on repair time.
- LinkWater system storages were holding 427 megalitres on 17 January, up 12 megalitres from 16 January. Overnight on 16 January 2011 East Bank increased production by 50 megalitres (to 220 megalitres per day) and West Bank came on overnight but has since been shut down. East Bank is now producing 170 megalitres per day. Total production from central plant is 370 megalitres per day currently but can quickly ramp up a further 450 megalitres per day if needed.
- While consumption on 15 January 2011 was 420 megalitres per day across the connected grid area, demand decreased on 16 January 2011 to 400 megalitres per day (lower than the expected 420 megalitres per day). Demand has increased (as at 2pm) on 17 January 2011 to around 420 megalitres per day and LinkWater system storages are declining (392 megalitres at 2.30pm on 17 January) to optimise water quality in the network.
- There has been no significant rainfall in the last 24 hours and no significant rainfall is expected in the next twenty-four hours. Mostly fine conditions are expected over the weekend, but showers will return early next week.
- At 6am Wivenhoe Dam was at 107.8% and dropping. The closing sequence began at 2pm on 17 January but held constant overnight s to assist water supply pumping at Lowood. The closing gates sequence will resume at 09:00 Tuesday before final closure on Thursday morning.
- The bridges below Wivenhoe Dam will progressively come out of water over the next few days.
- At 6am Somerset was 98.98m and 379,016ML at 99.8% and discharging through one cone valve. All sluices are shut.
- At 6am North Pine Dam was at 99.4% and all gates were closed.

Leslie Harrison Dam:
Gates closed.

Hinze Dam:

A minor release is being made from Hinze Dam through the emergency gates. The Lake Level is dropping and the gate will be closed today. There is no public access to the spillway.

It should be noted that the Seqwater water level gauge currently being reported on the BOM website is currently slightly under reading by about 50mm.

- On 17 January 2011 (8.14pm), there is a reticulation supply issue for 21 customers in the Mt Ommaney zone who are currently without water during the day. Loss of river crossings has impacted water usage. Further intermittent impacts across zones within the flood impact areas due to emergency water use. Rezoning work carried out to increase pressure.
- Sites tested for water quality by QUU on 17 January 2011 in Brisbane and Ipswich met water quality specifications (see note below). QUU has confirmed that routine sampling will recommence on 17 January for Brisbane and Scenic Rim, although higher frequencies of monitoring will continue in the Ipswich zones for 17 and 18 January 2011 at this stage.
- Queensland Health, through their Public Health Units, are monitoring for gastrointestinal diseases and determining whether these are associated with exposure with flood water or the drinking water system. To date, there have been no confirmed outbreaks
- NOTE: There was a report on 15 January 2011 of the detection of (*E. coli*) at 1 colony forming unit per 100 millilitres at Ashwell school at Rosewood (test taken on 14 January 2011). On 14 December 2010 there was also a detection of *E. coli* in the same location. These detections are likely due to the location of the sampling site and low usage of water during school holidays (as water sits in the pipes), and is unlikely to have anything to do with the current flood crisis. Therefore it has not been included in the water quality issues within this briefing note. QUU are managing this incident in a similar way in which they managed the December detection, and the incident has been reported to the Office of the Water Supply Regulator (OWSR), Queensland Health and the Water Grid Manager as per regulatory and Emergency Response Plan requirements, respectively. A follow up test undertaken on 15 January 2011 (results obtained on 16 January 2011) did not detect any *E. coli*.

TREATMENT PLANT	SUPPLY	QUALITY
Mt Crosby Water Treatment Plant (West Bank and East Bank)	Storage at 392 megalitres as at 2.30pm 17 January 2011. Although production by East Bank increased overnight (by 50 megalitres) on 16 January 2011 to 220 megalitres, production is now at 170 megalitres per day by East Bank. While West Bank was on overnight on 16 January 2011, current production is nil.	Plant is operating within quality specifications
North Pine Water Treatment Plant and Northern	Jointly delivering 100 megalitres per day	Plant is operating within quality specifications

Pipeline			
Southern Regional Water Pipeline Note: Supply from the desalination plant decreased from 100% to 66% on 15 January 2011 at 6pm.	Transporting 100 megalitres per day to central Queensland	Pipeline is operating within quality specifications	
Lander Shute Water Treatment Plant	Operating	Plant is operating within quality specifications	
Ewan Maddock Water Treatment Plant	Started at 17:30 on 15 January 2011 producing an estimated 200 litres per second.	Plant is operating within quality specifications	

UNCONNECTED WATER AREAS (Small towns)

Queensland Urban Utilities

General information

- The affected towns supplied by Queensland Urban Utilities (QUU) are:
 - Lowood Gatton Laidley Supply: which also delivers water to Grantham, Heildon, Fernvale and Withcott
 - Kilcoy
 - Somerset
 - Jimna
 - Linville and
 - Kirkleagh and Wivenhoe Dam recreation areas.
- All systems have charged storages.
- The permanent intake requirements at Lowood will be assessed when the floodwater recedes and the damage can be inspected. In the mean time, a diesel pump is being employed successfully.

Critical issues

- Supplies to the smaller centres have been restored sufficient to meet demands.
- The advice from QUU is that they expect 98% of customers will have been supplied with water since 10am on 17 January 2011.
- There are no major bursts (except for Fernvale) and there are ten crews available for any minor reticulation repairs.
- It is understood that all water supplies are now operational and all reservoirs are charged. Issues have been identified as follows:
 - Fernvale has experienced bursts in the pipe system and these are now being investigated.
 - Withcott has 450 connections and with power returned people will also rely on bores and rainwater in addition to town supply (as well as bottled water). Water is being fed into the reticulation system and most properties will be receiving water on 17 January 2011.
 - Grantham reticulation north of railway line is fully supplied as at 16 January 2011. However south of the railway line is fully evacuated. Bottled water is being supplied to emergency services.

- Detection 1: Test results received on 16 January 2011 from samples taken on 15 January 2011 revealed that *E. coli* was detected (at 1 colony forming unit per 100 millilitres) in the reticulation system at Laidley (Patrick St). This area falls within the boil water alert which was reissued on 15 January 2011. QUU took a follow up sample on 16 January at the site and the results of that test obtained on 17 January were negative for *E. coli*. QUU reported the initial detection to Queensland Health, Office of the Water Supply Regulator (in DERM) and the Water Grid Manager. QUU is undertaking normal corrective measures in response.
- Detection 2: Test results received on XX January 2011 (**date to be confirmed**) from samples taken on 17 January 2011 revealed that *E. coli* was detected (at 2 most probable number per 100 millilitres which is a different testing methodology to colony forming units per 100 millilitres) in the reticulation system at the Laidley Shire Council Depot (chlorine levels were low). This area falls within the boil water alert which was reissued on 16 January 2011. QUU has taken a follow up sample on 17 January at the site and the results will be obtained on 18 January. QUU has reported the detection to Queensland Health, Office of the Water Supply Regulator (in DERM) and the Water Grid Manager. QUU is undertaking normal corrective measures in response.
- Tests in the remainder of the sites on 17 January 2011 in Somerset and Lockyer Valley did not indicate detections of *E. coli*.
- Higher frequencies of monitoring will continue in the Lockyer Valley and Somerset zones for 17 and 18 January 2011.
- A boil water notice for the affected Lockyer Valley, Marburg and Somerset township towns was issued by Queensland Urban Utilities at approximately 3.00 pm on 13 January 2011 and is still in effect. This was reviewed and amended by the Office of the Water Supply Regulator (in the Department of Environment and Resource Management), Queensland Health and the Grid Water Quality Technical Coordination Team. That alert was reissued on 14 January 2011 to include Laidley. QUU reissued its boil water alert on 16 January 2011 in accordance with the request from Queensland Health for the inclusion of specific words in the alert. The notice was reissued on 17 January 2011.
- Restoration of power supplies enables maximum use of rainwater tanks and bores in the recovery process. Energex has supplied Withcott now
- There may be water quality issues when water supply is restored. For this reason, the "boil water" alert should remain in place until water quality testing has confirmed that the drinking water supplies are safe to drink. There may be other system breakages and operational issues, however QUU proposes to deal with these as a routine operation matter.
- For information on use of purified recycled water and class A+ recycled water for washdown, refer above to grid-connected water areas.
- More detailed information on specific areas is as follows:

AREA	SUPPLY	RESERVOIR STORAGE LEVELS (WTP – Water Treatment Plant reservoirs) (Distribution – Distribution reservoirs) Note some areas have only one reservoir	QUALITY
Lowood Gatton Laidley Water Supply Scheme	Lowood supply became operational at 5am 15 January 2011 and continues to deliver 140 litres per second (a reduced rate) via the use of a temporary diesel pump. The operation of the water treatment plant appears to be stable and water is getting through to Gatton. QUU is on-site with additional assistance from AlConnex to assist with the recovery operations. Grantham reticulation north of railway line is fully supplied. However south of the railway line is fully evacuated. Bottled water is being supplied to emergency services.	<p>WTP (at 2.30pm 17 Jan): Balance tank (at 2.30pm 17 Jan):</p> <p>Distribution: Plainlands</p> <p>Laidley Summers St* Laidley Douglas McInnes* Laidley Rd Rosewood* Sippel Rd (Lakes Estate)* (*combined equals 2 days supply)</p> <p>Forest Hill (equals 2 days supply) Woodlands (High) Gatton) Woodlands (Low) (Gatton) Cochrane St (Gatton) Cochrane St Low (Gatton) Heidon Postman's Ridge <u>Murphy's Creek</u> Tabletop Fernvale Withcott</p> <p>Lowood 1 (Jacqueline St) Lowood 2 (Glamorganvale) Lowood 3 (Acacia St)</p>	<p>23% 33%</p> <p>7% 17% 14% 100% 80%</p> <p>Test results from sample on 15 January at Laidley reveal <i>E. coli</i> detected at 1 colony forming unit per 100 millilitres (further details above). Resample taking place on 16 January 2011. Retest taken on 17 January was negative for <i>E. coli</i>.</p> <p>Test results from a sample on 17 January 2011 revealed that <i>E. coli</i> was detected (at 2 most probable number per 100 millilitres) at the Laidley Shire Council Depot. Resample was taken on 17 January at the site and the results will be obtained on 18 January.</p> <p>There will be consideration by QH and OWSR for lifting the boil water notice when there are at least 3 successive days of no detection of <i>E. coli</i>.</p> <p>However testing at this point in time indicates that water quality is meeting specifications. Further</p>

				testing is still required.
Esk	Plant is operating.		WTP (at 2.30pm 17 Jan): 92%	Plant is operating within quality specifications
Kilcoy	<p>Wade St: The main local supply intake was washed away and Seqwater is seeking to re-establish this supply.</p> <p>Seqwater has a backup diesel pump on the raw water supply feeding the local Kilcoy water treatment plant until power and a new intake arrangement can be installed.</p> <p>The abattoir at Kilcoy has been advised that they may now take water at their usual rate.</p> <p>In the meantime, the backup water supply from Somerset Dam via the Kilcoy/Somerset Treatment Plant is fully operational but not required at this time.</p>		<p>Distribution: 90%</p> <p>WTP: 100%</p> <p>Distribution (at 2.30pm 17 Jan): 90%</p>	Plant is operating within quality specifications
Somerset	<p>The water treatment plant is operational and can be operated when required. The main issue is the water turbidity and it would be more efficient to operate the plant when the turbidity level declines.</p>		<p>WTP (at 2.30pm 17 Jan): 82%</p> <p>Distribution: Not applicable as only one reservoir</p>	<p>Somerset township is included on boil water alert on 13 January 2011 which remains current.</p> <p>Plant is operating within quality specifications</p>
Jimna	Situation under control.		<p>WTP (at 2.30pm 17 Jan): 75%</p> <p>Distribution: Not applicable as only one reservoir</p>	Plant is operating within quality specifications
Linville	There is no power and a generator is being utilised. Plant is available to operate when required using the generator.		<p>WTP (at 2.30pm 17 Jan): 80%</p> <p>Distribution: Not applicable as only one reservoir</p>	Plant is operating within quality specifications

Kirkleagh, Wivenhoe and Atkinson camping grounds	<p>Camping grounds to be restored as a lower priority.</p> <p><u>Kirkleagh</u>: At 19:30 on 15 January 2011 reservoir level was unchanged at 2.5m.</p> <p>While the plant remains offline, operations plan to run this plant on 17 January 2011 (only to be operated while within quality specifications).</p> <p><u>Wivenhoe camping grounds</u>: Water treatment plant is off and currently inoperable. Work is planned to commence on the plant on 17 January 2011.</p> <p>4 houses are supplied from the source and water is being tankered in when required.</p> <p><u>Atkinson</u>: Water treatment plant remains off. Water is tankered when required and chlorine residual boosted when delivered. A boil water alert notice remains in place.</p>	55%	N/A
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Note: Figures for reservoir storages are as at 7pm Sunday 16 January 2011, with the exception of:

- figures underlined which are as at 3pm 16 January 2011
- figures for Withcott and Ferrvale which are as at 10am 17 January 2011
- those figures which are specified as at 2.30pm 17 January 2011.

Unitywater

The affected towns supplied by Unitywater are Dayboro and Kenilworth.
As at 6AM 18 January

AREA	SUPPLY	TREATMENT PLANT RESERVOIR STORAGE LEVELS	QUALITY
Dayboro	Water treatment plant operating from 13 January 2011. Plant remains operating on manual while operators are monitoring turbidity in raw water intake	High level reservoir: 90% Low level reservoir: 62% Holding 2-3 days supply	Plant is operating within quality specifications
Kenilworth	Plant remains operating on manual while operators are monitoring turbidity in raw water intake	WTP: 85% Holding 2-3 days supply	Plant is operating within quality specifications

SEWERAGE

This update is as at 10am 17 January 2011:

Provisional Assessment

- Queensland Urban Utilities (QUU) has established an Eastern and Western Recovery Teams with the Western Team recovering from west of Ipswich and Lockyer Valley, and the Eastern Team looking after Brisbane city.
- The recovery teams have been established in a 3 phase recovery process:
 - To undertake a preliminary assessment of the facilities including safety of access and a preliminary assessment of the situation;

When safety of access is ascertained, cleanup crews are despatched (

- 70 cleanup crews in total have been established); and
 - Repair team comprising fitters and electricians are deployed as necessary.
- In excess of 350 personnel have been assigned for cleanup and recovery comprising QUU, Unitywater, AllConnex and others.
- Asset classes that are being inspected and repaired include pump stations, wastewater treatment plants, pipelines, civil structures (buildings) and control system including System Control and Data Acquisition (SCADA).
- Severe damage can be expected for those facilities where the electrics and control systems have been fully submerged. A process has been initiated for a quick turnaround of damaged switchboards at QUU workshops.
- All risk analysis and prioritisation of repairs to sewer and water civil network and buildings has been completed. Reports up to 5pm, 15 January, were that a very initial physical assessment had occurred on 79 pump stations and 9 water reclamation plants. These sites will now be isolated and tested.
- Much of the work will be outsourced to contractors under existing "panel of provider" arrangements. Significant coordination is occurring with the councils concerned and AllConnex staff are assisting with the recovery.
- Where there has been severe flooding and manhole covers may have been blown and sewage discharged into private properties, a call centre has been established and cleanup crew will be deployed where the household reports that such events have occurred.
- Clean up crews have now started in the field. Initial clean up has started at 51 sites. Agreement has been reached with WaterSecure to provide recycled water for clean up. QUU assisted with the repairs and clean up of the WaterSecure Bundamba purified water recycling plant. Recovery operations are being hindered by the volume of debris and traffic at critical locations.
- QUU will not be addressing the clean up requirements of flooded private septic tanks. This may be a matter for consideration by the relevant councils.
- The priority for recovery is 1 - restoration of water supply, 2 – repair of sewage pump stations to remove wastewater from the suburbs, and 3 – repair of wastewater treatment plants.
- QUU reports damage as follows. This list is unlikely to grow with the exception of pipe damage in areas that are still submerged.

SEQ Regional Communities

- The sewerer communities include:
Lockyer Valley Regional Council: Gatton, Laidley, Forest Hill, Fernvale, Lowood, Helidon
Somerset Regional Council: Esk, Toogoolawah, Kilcoy, and Somerset

- The Scenic Rim Regional Council reports that all its wastewater facilities are operating normally.
- The town of Withcott is serviced by septic tanks.
- For Lockyer Valley Regional Council area, QUU advises:
 - All sewerage pump stations fully restored.
 - There have been no further updates on the following issues:
 - o Gatton not operating. Repairs have commenced to the main Gatton sewer rising main which was washed away.
 - o Laidley and Forest Hill plants are operational.
 - o No power available at the Lowood and Helidon wastewater treatment plants
- The town of Withcott is serviced by septic tanks.
- For Somerset Regional Council area, QUU advises:
 - Esk wastewater treatment plant is operational but sill an issue with the pump station and alternative options are being investigated.
 - Access to Fernvale wastewater treatment plant is still flooded although plant is ok. Possibly inspecting on 17 January with possible airlift access.
 - Toogoolawah and Kilcoy plants are operational.
 - Somerset Dam township is serviced by septic tanks.
 - Sewer pump stations down at Esk (1), Lowood (2), Kilcoy (1) and Fernvale (3) due to power outages and flooding. Cleaning and testing underway today for accessible sites.

Brisbane and surrounding metropolitan areas

It has been reported by QJU as follows:

- Ipswich:
 - 27 sewerage pumping stations are not operating, but no impact on residents is expected.
 - Bundamba wastewater treatment plant is operating (Stage 1 screening only)
 - Goodna wastewater treatment plant is expected to be operating (Stage 1 screening only) by 17 January.
 - Sewage pump stations are being dried (switchboards and motors), some parts replaced and inspected by Energex prior to recommissioning
 - Rosewood and Carole Park wastewater treatment plants are fully functional
- Brisbane
 - 47 (down from 49) sewerage pumping stations flooded or without power, but no impact on residents is expected – note SITREP 23 contained incorrect numbers.
 - Power to the Wacol wastewater treatment plant has been restored and is now operational.
 - Karana Downs, Oxley and Fairfield wastewater treatment plants are still not operational.
 - The damage to the wastewater treatment plants at Oxley, Fairfield and Karana Downs are of concern due to the extent of submergence.
 - Major damage to Oxley and Fairfield which are high technology facilities is expected, particularly to the electrical and control systems and it may be weeks before these plants are fully restored. Clean up and repair crews are on-site at Oxley and Fairfield for screening recovery by Monday 17 January – full recovery will take considerable time. For Karana Downs, recovery team was on-site 16 January 2011 for assessment of the condition.
 - Oxley Creek wastewater treatment plant - a temporary pump has been installed and is pumping through primary screens then to bypass. Recover team checking status of all electrical equipment.
 - Fairfield wastewater treatment plant - operating (stage 1) only.

**INTERIM
SEQ WATER GRID REPORT
ISSUES FOR WATER QUALITY AND SUPPLY AND SEWERAGE TREATMENT
AS AT TUESDAY 18 JANUARY 2011 (8.30AM)**

Changes since report provided at 17 January 3.00pm highlighted in bold.

Attached is QUU SITREP-26 (17 January 8.14PM) and received at 18 January 7.47AM .
Next QUU SITREP due 8.30am 18 January 2011.

WATER

GRID-CONNECTED WATER AREAS

General information

- Grid connected areas are supplied by the SEQ Water Grid Manager and include Brisbane, Ipswich, Scenic Rim, Somerset, Lockyer (Queensland Urban Utilities - QUU), Sunshine Coast, Moreton Bay (Unity Water), Gold Coast, Logan and Redlands (AllConnex) council jurisdictions. The areas most impacted are the Lockyer Valley, Somerset, Ipswich and Brisbane.
- Seqwater and LinkWater's operational monitoring capabilities are fully operational which, in combination with the verification monitoring, continue to highlight safe drinking water quality.
- A boil water notice is still in effect for the Atkinson Dam (Seqwater Dam) recreational site.
- LinkWater is accommodating increased requirements for water supply for Sunshine Coast area from the Water Grid.
- No *E. coli* positive results have been returned in the SEQ bulk distribution network this week.
- LinkWater has increased its verification testing frequency to daily (from weekly) since 12 January 2011 and will continue to do this until further notice, although some sites still remain inaccessible. Seqwater has increased testing frequency (particularly for problematic assets and assets being put on line after being offline) and testing frequency will increase further when sampling sites are accessible.

- Seqwater reports that water quality specifications are being met where water treatment plants are operational under current flow scenarios. Queensland Health has advised on 15 January 2011 that the Water Grid Manager revert to standard operating procedures and re-advise if there is a further change to turbidity that will result in the end product exceeding agreed critical limits.
- While there are few known issues with the reticulation system at this stage in the grid connected area, ongoing issues may be identified with water quality and supply over time (e.g. main breaks) and reticulation systems are currently being monitored.
- Approval has been given by Queensland Health and the Office of the Water Supply Regulator (the regulators) to use in both metropolitan and regional SEQ communities purified recycled water for washdown purposes only (no human or animal consumption). A press release on this matter was issued on 15 January 2011. There are at least three sites that can provide purified recycled water to tankers – Bundamba, Lowood and Gibson Island. To manage supply of the water from the charge points at those sites, there will staged notification for tankers, fire brigade and the Department of Main Roads and Transport. As at 16 January 2011, only the Lowood offtake has been utilised by the Rural Fire Brigade.

Critical issues

- Lowood WTP offline as at 4.17AM due to temporary pump failure. At 0505am QUU advised there is sufficient supply in reservoirs supplied by the Lowood WTP for about 1-2 days. Seqwater Director Operations is on his way to the site to assess the issues and provide further information on repair time.
- LinkWater system storages were holding 427 megalitres on 17 January, up 12 megalitres from 16 January. Overnight on 16 January 2011 East Bank increased production by 50 megalitres (to 220 megalitres per day) and West Bank came on overnight but has since been shut down. East Bank is now producing 170 megalitres per day. Total production from central plant is 370 megalitres per day currently but can quickly ramp up a further 450 megalitres per day if needed.
- While consumption on 15 January 2011 was 420 megalitres per day across the connected grid area, demand decreased on 16 January 2011 to 400 megalitres per day (lower than the expected 420 megalitres per day). Demand has increased (as at 2pm) on 17 January 2011 to around 420 megalitres per day and LinkWater system storages are declining (392 megalitres at 2.30pm on 17 January) to optimise water quality in the network.
- There has been no significant rainfall in the last 24 hours and no significant rainfall is expected in the next twenty-four hours. Mostly fine conditions are expected over the weekend, but showers will return early next week.
- At 6am Wivenhoe Dam was at 107.8% and dropping. The closing sequence began at 2pm on 17 January but held constant overnight s to assist water supply pumping at Lowood. The closing gates sequence will resume at 09:00 Tuesday before final closure on Thursday morning.
- The bridges below Wivenhoe Dam will progressively come out of water over the next few days.
- At 6am Somerset was 98.98m and 379,016ML at 99.8% and discharging through one cone valve. All sluices are shut.
- At 6am North Pine Dam was at 99.4% and all gates were closed.

Leslie Harrison Dam:
Gates closed.

Hinze Dam:

A minor release is being made from Hinze Dam through the emergency gates. The Lake Level is dropping and the gate will be closed today. There is no public access to the spillway.

It should be noted that the Seqwater water level gauge currently being reported on the BoM website is currently slightly under reading by about 50mm.

- On 17 January 2011 (8.14pm), there is a reticulation supply issue for 21 customers in the Mt Ommaney zone who are currently without water during the day. Loss of river crossings has impacted water usage. Further intermittent impacts across zones within the flood impact areas due to emergency water use. Rezoning work carried out to increase pressure.
- Sites tested for water quality by QUU on 17 January 2011 in Brisbane and Ipswich met water quality specifications (see note below). QUU has confirmed that routine sampling will recommence on 17 January for Brisbane and Scenic Rim, although higher frequencies of monitoring will continue in the Ipswich zones for 17 and 18 January 2011 at this stage.
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				testing is still required.
Esk	Plant is operating.		WTP (at 2.30pm 17 Jan): 92%	Plant is operating within quality specifications
Kilcoy	<p>Wade St: The main local supply intake was washed away and Seqwater is seeking to re-establish this supply.</p> <p>Seqwater has a backup diesel pump on the raw water supply feeding the local Kilcoy water treatment plant until power and a new intake arrangement can be installed.</p> <p>The abattoir at Kilcoy has been advised that they may now take water at their usual rate.</p> <p>In the meantime, the backup water supply from Somerset Dam via the Kilcoy/Somerset Treatment Plant is fully operational but not required at this time.</p>		<p>Distribution: 90%</p> <p>WTP: 100%</p> <p>Distribution (at 2.30pm 17 Jan): 90%</p>	Plant is operating within quality specifications
Somerset	The water treatment plant is operational and can be operated when required. The main issue is the water turbidity and it would be more efficient to operate the plant when the turbidity level declines.		<p>WTP (at 2.30pm 17 Jan): 82%</p> <p>Distribution: Not applicable as only one reservoir</p>	<p>Somerset township is included on boil water alert on 13 January 2011 which remains current.</p> <p>Plant is operating within quality specifications</p>
Jimna	Situation under control.		<p>WTP (at 2.30pm 17 Jan): 75%</p> <p>Distribution: Not applicable as only one reservoir</p>	Plant is operating within quality specifications
Linville	There is no power and a generator is being utilised. Plant is available to operate when required using the generator.		<p>WTP (at 2.30pm 17 Jan): 80%</p> <p>Distribution: Not applicable as only one reservoir</p>	Plant is operating within quality specifications

Kirkleagh, Wivenhoe and Atkinson camping grounds	<p>Camping grounds to be restored as a lower priority.</p> <p><u>Kirkleagh</u>: At 19:30 on 15 January 2011 reservoir level was unchanged at 2.5m.</p> <p>While the plant remains offline, operations plan to run this plant on 17 January 2011 (only to be operated while within quality specifications).</p> <p><u>Wivenhoe camping grounds</u>: Water treatment plant is off and currently inoperable. Work is planned to commence on the plant on 17 January 2011.</p> <p>4 houses are supplied from the source and water is being tankered in when required.</p> <p><u>Atkinson</u>: Water treatment plant remains off. Water is tankered when required and chlorine residual boosted when delivered. A boil water alert notice remains in place.</p>	55%	N/A
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- Note: Figures for reservoir storages are as at 7pm Sunday 16 January 2011, with the exception of:
- figures underlined which are as at 3pm 16 January 2011
 - figures for Withcott and Ferrvale which are as at 10am 17 January 2011
 - those figures which are specified as at 2.30pm 17 January 2011.

Unitywater

The affected towns supplied by Unitywater are Dayboro and Kenilworth.
As at 6AM 18 January

AREA	SUPPLY	TREATMENT PLANT RESERVOIR STORAGE LEVELS	QUALITY
Dayboro	Water treatment plant operating from 13 January 2011. Plant remains operating on manual while operators are monitoring turbidity in raw water intake	High level reservoir: 90% Low level reservoir: 62% Holding 2-3 days supply	Plant is operating within quality specifications
Kenilworth	Plant remains operating on manual while operators are monitoring turbidity in raw water intake	WTP: 85% Holding 2-3 days supply	Plant is operating within quality specifications

SEWERAGE

This update is as at 10am 17 January 2011:

Provisional Assessment

- Queensland Urban Utilities (QUU) has established an Eastern and Western Recovery Teams with the Western Team recovering from west of Ipswich and Lockyer Valley, and the Eastern Team looking after Brisbane city.
- The recovery teams have been established in a 3 phase recovery process:
 - To undertake a preliminary assessment of the facilities including safety of access and a preliminary assessment of the situation;

When safety of access is ascertained, cleanup crews are despatched (

- 70 cleanup crews in total have been established); and
 - Repair team comprising fitters and electricians are deployed as necessary.
- In excess of 350 personnel have been assigned for cleanup and recovery comprising QUU, Unitywater, AllConnex and others.
- Asset classes that are being inspected and repaired include pump stations, wastewater treatment plants, pipelines, civil structures (buildings) and control system including System Control and Data Acquisition (SCADA).
- Severe damage can be expected for those facilities where the electrics and control systems have been fully submerged. A process has been initiated for a quick turnaround of damaged switchboards at QUU workshops.
- All risk analysis and prioritisation of repairs to sewer and water civil network and buildings has been completed. Reports up to 5pm, 15 January, were that a very initial physical assessment had occurred on 79 pump stations and 9 water reclamation plants. These sites will now be isolated and tested.
- Much of the work will be outsourced to contractors under existing "panel of provider" arrangements. Significant coordination is occurring with the councils concerned and AllConnex staff are assisting with the recovery.
- Where there has been severe flooding and manhole covers may have been blown and sewage discharged into private properties, a call centre has been established and cleanup crew will be deployed where the household reports that such events have occurred.
- Clean up crews have now started in the field. Initial clean up has started at 51 sites. Agreement has been reached with WaterSecure to provide recycled water for clean up. QUU assisted with the repairs and clean up of the WaterSecure Bundamba purified water recycling plant. Recovery operations are being hindered by the volume of debris and traffic at critical locations.
- QUU will not be addressing the clean up requirements of flooded private septic tanks. This may be a matter for consideration by the relevant councils.
- The priority for recovery is 1 - restoration of water supply, 2 – repair of sewage pump stations to remove wastewater from the suburbs, and 3 – repair of wastewater treatment plants.
- QUU reports damage as follows. This list is unlikely to grow with the exception of pipe damage in areas that are still submerged.

SEQ Regional Communities

- The sewerer communities include:
Lockyer Valley Regional Council: Gatton, Laidley, Forest Hill, Fernvale, Lowood, Helidon
Somerset Regional Council: Esk, Toogoolawah, Kilcoy, and Somerset.

- The Scenic Rim Regional Council reports that all its wastewater facilities are operating normally.
- The town of Withcott is serviced by septic tanks.
- For Lockyer Valley Regional Council area, QUU advises:
 - All sewerage pump stations fully restored.
 - There have been no further updates on the following issues:
 - o Gatton not operating. Repairs have commenced to the main Gatton sewer rising main which was washed away.
 - o Laidley and Forest Hill plants are operational.
 - o No power available at the Lowood and Helidon wastewater treatment plants
- The town of Withcott is serviced by septic tanks.
- For Somerset Regional Council area, QUU advises:
 - Esk wastewater treatment plant is operational but still an issue with the pump station and alternative options are being investigated.
 - Access to Fernvale wastewater treatment plant is still flooded although plant is ok. Possibly inspecting on 17 January with possible airlift access.
 - Toogoolawah and Kilcoy plants are operational.
 - Somerset Dam township is serviced by septic tanks.
 - Sewer pump stations down at Esk (1), Lowood (2), Kilcoy (1) and Fernvale (3) due to power outages and flooding. Cleaning and testing underway today for accessible sites.

Brisbane and surrounding metropolitan areas

It has been reported by QUU as follows:

- Ipswich:
 - 27 sewerage pumping stations are not operating, but no impact on residents is expected.
 - Bundamba wastewater treatment plant is operating (Stage 1 screening only)
 - Goodna wastewater treatment plant is expected to be operating (Stage 1 screening only) by 17 January.
 - Sewage pump stations are being dried (switchboards and motors), some parts replaced and inspected by Energex prior to recommissioning
 - Rosewood and Carole Park wastewater treatment plants are fully functional
- Brisbane
 - 47 (down from 49) sewerage pumping stations flooded or without power, but no impact on residents is expected – note SITREP 23 contained incorrect numbers.
 - Power to the Wacol wastewater treatment plant has been restored and is now operational.
 - Karana Downs, Oxley and Fairfield wastewater treatment plants are still not operational.
 - The damage to the wastewater treatment plants at Oxley, Fairfield and Karana Downs are of concern due to the extent of submergence.
 - Major damage to Oxley and Fairfield which are high technology facilities is expected, particularly to the electrical and control systems and it may be weeks before these plants are fully restored. Clean up and repair crews are on-site at Oxley and Fairfield for screening recovery by Monday 17 January – full recovery will take considerable time. For Karana Downs, recovery team was on-site 16 January 2011 for assessment of the condition.
 - Oxley Creek wastewater treatment plant - a temporary pump has been installed and is pumping through primary screens then to bypass. Recover team checking status of all electrical equipment
 - Fairfield wastewater treatment plant - operating (stage 1) only.

[REDACTED]

From: Dan Spiller [REDACTED]
Sent: Tuesday, 18 January 2011 9:27 AM
To: Bradley John; [REDACTED]
Cc: Dennien Barry [REDACTED] 'Madgwick'; [REDACTED] Best Debbie; [REDACTED] 'Rob Drury'; 'Mike Foster'
Subject: Update on releases
Attachments: Technical_Situation_Report_W61.docx
 Current Technical Situation Report for information.

Somerset Dam is at 99.8% of capacity and Wivenhoe Dam at 107.8%.

Seqwater advises that releases from Wivenhoe Dam were held constant overnight at about 2,050 cubic metres per second to assist water supply pumping at Lowood. Gate closure will resume at 09:00 Tuesday before final closure on Thursday morning. The dam will be near full supply and releases will be made through the regulator to account for ongoing base-flow.

The strategy was developed in consultation with BCC, which indicated that it would prefer a Thursday closure to increase release time and minimize possible impacts in relation to slumping along Coronation Drive. BCC also advises operators that they also would like closure no later than Thursday prior to predicted high tides late this week.

Please call me on [REDACTED] if you require any further information.

Regards,
 Daniel Spiller

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[REDACTED]

From: Ellwood Dean
Sent: Tuesday, 18 January 2011 5:19 PM
To: Bradley John; Wall Terry; Best Debbie
Cc: Reilly Bob; McMain Lisa
Subject: FW: Maintenance of water Supply Lockyer Valley towns supplied by Lowood Water Treatment Plant: Approval to vary floodwater releases under the Flood Mitigation Manual for Wivenhoe/Somerset Dams

Please see attached advice from GM OWSR regarding a variation to the Flood Mitigation Manual for Wivenhoe/Somerset dams. This advice will be included in the next sit rep as well.

Regards
dean

Dean Ellwood
Assistant Director-General
Environment & Natural Resource Regulation
Department of Environment and Resource Management
Phone: [REDACTED]
Mobile: [REDACTED]
Email: [REDACTED]
Visit: Floor 7 400 George Street Brisbane

From: Reilly Bob
Sent: Tuesday, 18 January 2011 5:13 PM
To: Ellwood Dean
Cc: McMain Lisa
Subject: Maintenance of water Supply Lockyer Valley towns supplied by Lowood Water Treatment Plant: Approval to vary floodwater releases under the Flood Mitigation Manual for Wivenhoe/Somerset Dams

Hi Dean

The purpose of this email is to advise you of an urgent regulatory decision that I made this afternoon to assist in maintaining the drinking water supply to the Lockyer Valley towns e.g. Gatton, supplied by the Lowood Water Treatment Plant owned by Seqwater.

Background

The Lowood raw water pumps were significantly damaged in the January 2011 flood event. Temporary arrangements have been put in place. However, at approximately 3 pm this afternoon, I was verbally advised by the Chief Executive Officer of Seqwater, Peter Borrows, that the flow level in the Brisbane River at Lowood needed to be maintained for another 12 hours to enable the temporary pumping arrangements to be stabilised. (In the event of failure, the raw water pumps would cease operating. If they could not be repaired quickly, and the verbal advice was that this would be difficult, then drinking water supplies to the Lockyer Valley towns would be compromised).

The desired outcome could be achieved by maintaining the existing level of releases for a further 12 hours from Wivenhoe, than planned. Reductions in releases were scheduled to commence at around 3 pm. (Releases would be gradually reduced so as to minimise the chances of river bank slumping)

Seqwater advised that maintaining the releases would reduce the full supply level in Wivenhoe/Somerset to 95% (instead of 100%), and that the Grid Manager had advised on 24

December that they had no "in principle" objection to Seqwater undertaking such action.

However, as such an approach constituted a variation to the flood release strategy approved in the Flood Mitigation Manual, approval from the CEO of DERM, or a delegated officer such as myself, was required. Such decisions are normally made by OWSR staff.

Decision

Given the circumstances, I approved the variation, as to do otherwise would potentially compromise drinking water supplies in the major Lockyer Valley towns. (Seqwater subsequently advised that the actual reduction in dam levels will be to 94.6% in Wivenhoe and 97.3% at Somerset)

Regards

Bob

Bob Reilly
General Manager, Office of the Water Supply Regulator

Telephone: [REDACTED]

Email: [REDACTED]

www.derm.qld.gov.au

Department of Environment and Resource Management
Lvl 3 41 George Street, Brisbane Q 4000
GPO Box 2454, Brisbane Q 4001

[REDACTED]

From: Dan Spiller [REDACTED]
Sent: Wednesday, 19 January 2011 7:52 AM
To: Bradley John [REDACTED]
Cc: Dennien Barry [REDACTED] Best Debbie;
[REDACTED] 'Rob Drury'
Subject: Update on release strategy
Attachments: Technical_Situation_Report_W62.docx

All,

Current Technical Situation Report attached for information.

Seqwater has advised that Somerset Dam is at 100% of capacity with no further releases being made.

Wivenhoe Dam is at 99.3%, with all gates to be closed this afternoon. Seqwater advises that the dam level when the last gate is closed is expected to be between 66.5m AHD (95.5%) and 66.9m AHD (99.1%), depending on final closure. Releases will continue through the regulator cone valve and possibly the Mini-Hydro (depending on when it can be re-started) to account for ongoing base-flow once all radial gates are closed

The temporary Lowood pump station was relocated last night, meaning that it is no longer a constraint on the closure sequence.

The strategy was developed in consultation with BCC.

Regards,
Daniel Spiller

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1/04/2011

[REDACTED]

From: Water Grid Emergency Manager [REDACTED]
Sent: Sunday, 16 January 2011 7:30 AM
To: Bradley John
Subject: QUU Situation Reports - correction
Follow Up Flag: Follow up
Flag Status: Completed
Attachments: 20110115 Executive Summary sitrep 19_1800.doc; 20110115 Sitrep 19 Extreme wet weather.doc; 20110116 Executive Summary sitrep 20_0500.doc; 20110116 Sitrep 20 Extreme wet weather.doc

Colleagues,

Please note, there is an error in the QUU Situation Report. We confirm that the Lowood Water Treatment Plant is operational. QUU were aware of the status and have noted the correction.

Regards,

Water Grid Emergency Team
[REDACTED]

**LDCC Queensland Urban Utilities UPDATE 19:00pm Saturday
15/1/2011**

EVENT SUMMARY – SITREP 19

Status of water and sewerage assets and services

The following is a summary of current and forecast impacts

Brisbane City Council area (as at 19:00pm)

Water:

- All water pumping stations operational (one with generator set). Reservoir levels maintained during the day under flood recovery demands (street and house cleaning)

Wastewater:

- 49 sewerage pumping stations flooded or without power.
- 3 wastewater treatment plants have been flooded and are not operating (Karana Downs, Oxley, Fairfield).
- No impact on residents.

Ipswich City Council area

Water:

- No operational problems.
- Water sampling commenced, awaiting results on 16/1/2011.

Wastewater:

- Two wastewater treatment plants remain offline – Bundamba and Goodna.
- 31 sewerage pumping stations are not operating.
- No impact on residents.

Lockyer Valley

Water:

- All reservoirs intact.
- Progressively filling Reservoirs.
- Tanker deliveries continuing to Lowood and Gatton Reservoirs during the night
- Postman's Ridge Pump Station operational. Repairs to supply main (Withcott) completed.
- Repairing the road for tanker access into Helidon.
- Withcott – Mains to be charged on Sunday 16 January
- Regency Downs and Kensington Grove returning to normal operational status.

Wastewater:

- All water reclamation plants operational.
- Repairs have commenced to Main Sewer Rising Main to Gatton, which washed away.

Scenic Rim

Water and Wastewater: No issues

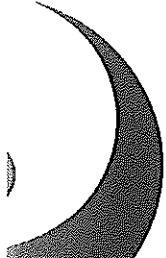
Somerset

Water:

- Lowood WTP operational and filling clear water tank, supply restored , progressively filling Reservoirs.
- Esk WTP and Toogoolawah WTP returned to normal operation status.
- Minden customers reliant on bottled water.
- Power restored to Linville PS and water is being delivered to the reservoir.
- Fernvale still in supply but reliant on water tankers to maintain current levels.
- Extra crews have been arranged on standby as a contingency plan for the water supply to the affected Lockyer Valley and Somerset areas.
- A 20,000 litre tanker has been organised to deliver potable water to the Glamorgan Vale Water Board Reservoir to assist in providing an old age home with water. For non-potable use only.

Wastewater:

- Fernvale WRP still not accessible.
- Toogoolawah WRP returned to normal operation.
- Esk WRP now accessible, repairs expected to be completed on 16 January.



- Lowood WRP still without power (maybe another 5 days)

LOCKYER VALLEY WATER ASSETS STATUS

LDCC

Updated – 19:00PM Saturday, 15 January 2011

RESERVOIR/PS	LOCATION	CAPACITY (ML)	HOLDING (%)	EST SERVICE DURATION	SERVICEABLE (Y/N)	NOTES	Status
Plainlands	Plainlands	45	4		Y		
Victoria St	Forest Hill	0.18	60	2 days	Y	Visual estimation 2m	
Summer St boosted zone, pump station and reservoir	Laidley	1.12	58	2 days	Y		Consideration of System Isolation
Douglas McInnes Drive		1.14	53		Y		
Rosewood Laidley Road Reservoir		0.45	100		Y	Can backfeed into town	
Sippel Road (Lakes Estate)		0.09	80		Y	Trickle feed to tanks	
Glenore Grove Booster					N	Only used during high demand.	Not a priority (given demand)
Gatton Reservoir - low	Woodlands Rd	5.95	0.24ML		Y		
Gatton Reservoir - high	Woodlands Rd	0.24			Y		
Gatton Reservoir - low	Cochrane St	2	1.5M visual		Y		Fencing washed away

						lightning strike
						telemetry & local control damaged (not sure of this or below)
Gatton Reservoir - high	Cochrane St	2	100		Y	Fencing washed away
						lightning strike
						telemetry & local control possibly damaged
Gatton PS		N/A			Y	Network water supply unavailable
Helidon - Small	Seventeen Mile Road	0.7	0		Y	Networked water supply unavailable
Helidon - Large	Seventeen Mile Road	1.5	5		Y	
Millora Rd (Dobel Dr)		0.18	5		Y	
Rossiter Rd Pump Station	Rossiter Rd	N/A			N	Only two houses drawing on this system. No Power - not used often.
Warrego Hwy PS		N/A			N	Pump Motor and Switchboard being replaced. Genset on site until 16/1 Expect operational today. JP Richards working on repairs to switchboard (expect 2 to 3 weeks). Gen set has arrived. Can operate on manual with Gen set - only waiting on wiring in of soft starter. Motor at Donaldsons getting dried

							out.
Postmans Ridge	Murphy's Creek Ridge	0.33	24		N		Contractor has the main reinstated. Expect serviceable by afternoon Sat 15 Jan. Waiting for a fitting to connect either end.
Postmans Ridge PS		N/A			N	No power to site. Genset on standby at Coates - now has approval to transport, 5t limit MRD approval received for this move.	Switchboard, building and auxiliary equipment is serviceable.
Withcott	Dolley's Rd	1.94	0		N	No inlet feed available due to break on 200mm DICL inlet main after pump station at Postman's Ridge. Both ends isolated.	Networked water supply unavailable - reservoir OK but empty. Expect fitting restored late afternoon Sat 15 Jan.
Withcott PS		N/A			Y	No Water	

Tabletop	Berghoffer Rd	0.003	25		Y		Plenty of water. No power. No check yet on boost pumps. Maybe ten customers on boost.
Tabletop PS					Y		

Please note: Details in this table are based on the latest information at time of publication. Due to the changing nature of the situation this table will be updated regularly.

LOCKYER VALLEY WASTEWATER STATUS

LDCC

Updated – 19:00PM Saturday, 15 January 2011

ASSET	LOCATION	STATUS	NOTES
Railway St WRP	Forest Hill	Y	
Gordon St PS (429)	Forest Hill	Y	
Railway St PS (428)	Forest Hill	Y	Operational, but standby pump is in electrical fault. Crews to address today, probably.
Treatment Plant Rd WRP	Gatton	Y	Operational - has power but no sodium hypochlorite for disinfection. Order placed but not accessible by road.
Crescent St PS (408)	Gatton	Y	
East St PS (409)	Gatton	Y	
Myler Crt PS (410)	Gatton	Y	
Lake Apex PS (411)	Gatton	Y	
Industrial Rd PS (412)	Gatton	Y	
South St PS (413)	Gatton	Y	Operational, but high float fault alarm.
Karrasch Road PS (420)	Placid Hills	Y	Operational, damaged pump now reset and OK.
Hennessy St PS (414)	Gatton	Y	
Golf Links Dve PS (415)	Gatton	Y	
Western Dve PS (416)	Gatton	Y	Duty pump OK, but standby pump is out on high amps alarm. Requires lifting.
Tew Crt PS (417)	Gatton	Y	Duty pump OK, but standby pump is out
Back Flagstone Creek Rd WRP	Helidon	Y	Operational but not accessible as yet. No mains power. Generator now running the effluent transfer pump. Awaiting supply restoration.
Airforce Rd PS (405)	Helidon	Y	
Lawlers Rd PS (406)	Helidon	Y	

Plant St PS (407)	Helidon	Y	
Boundary Rd WRP	Laidley	Y	
Kurrajong Crt PS (424)	Laidley	Y	
Stanford Pl PS (425)	Laidley	Y	
Boundary Rd PS (426)	Laidley	Y	
Hayes St PS (427)	Laidley	Y	
Alexander St PS	Laidley	Y	
Pike St PS	Laidley	Y	Operational but limited road access due to power pole over with low hanging wires. 4WD access OK. Pole fix being arranged with local Lowood contractor.
Patrick St PS (422)	Laidley	Y	Operational but limited road access
Pioneer St PS	Laidley	Y	
Storr St PS	Laidley	Y	
Vaux St PS	Laidley	Y	

WATER RECLAMATION PLANT	NOTES
Gatton WRP	Operational and Accessible
Laidley WRP	Operational and Accessible
Forest Hill WRP	Operational and Accessible
Carole Park Reclamation Pant	Not accessible but Operational

SOMERSET WATER ASSETS STATUS

LDCC

Updated – 19:00PM Saturday, 15 January 2011

RESERVOIR/P	LOCATION	CAPACITY (ML)	HOLDING (%)	EST SERVICE DURATION	SERVICEABLE (Y/N)	NOTES
Lowood 1	Jacqueline St Res 2	3			Y	Level is Critically Low but being maintained due to reliance on tankers
Lowood 2	Glamorgan Vale Rd / Ziebell	2			Y	
Lowood 3	Acacia St	1.13			Y	
Tarampa	Prenzlau Rd	0.022			N	No supply
Fernvale	Knox Rd	2	EMPTY	-	Y	Level is Critically Low but being maintained due to reliance on tankers
Balance tank/P	Fernvale	UNK			U	
Lowood West		3			Y	Networked water supply unavailable
Esk		1.1 ML	0.4		Y	To return to normal status 14/1 afternoon
BP	East St	N/A			Y	45kW soft start – 18l/s max
Toogoolawah		2	0.5		Y	To return to normal status 14/1 afternoon
Kilcoy	Saleyards Rd	3.6	?	1 day	Y	(Source: WGM) 3 tanks – 0.45, 0.63 & 1.8 ML
Lowood	WP75 Forest Hill Fernvale Road				N	Needs electrical work, went

						under
Lowood	WP76 Main st				Y	
Lowood	WP77 James st				Y	
Lowood	WP78 Prospect st				Y	
Lowood	WP79 Prospect st				Y	
Lowood	WP80 Prospect st				Y	
Lowood	WP81				N	Went under, needs electrical work
Lowood	WP82 Macadamia st				Y	
Lowood	WP83 Haslington park				Y	
Jimna			65	2 days	Y	(Source: WGM)
Linville		0.1	50	2 days	Y	Incorrect SCADA reading at Lowood. Manually checked (Source: WGM)

SOMERSET WASTEWATER ASSETS STATUS

IDCC

Updated – 19:00PM Saturday, 15 January 2011

WATER RECLAMATION PLANT	PREVIOUS NOTES	CURRENT STATUS
Esk WRP	Was inundated, Now accessible	Not Serviceable – No Further Information available
Fernvale WRP	Not Accessible	Not Serviceable – No Further Information available
Lowood WRP	Was inundated, Now accessible	Not Serviceable – No Further Information available
Kilcoy WRP	Not Accessible	Power Restored
Toogoolawah WRP	Not Serviceable – No Further Information available	Operational

SCENIC RIM AREA STATUS

LDCC

Updated – 19:00PM Saturday, 15 January 2011

NO ISSUES

BRISBANE AREA WATER ASSETS SUMMARY

LDCC

Updated – 19:00PM Saturday, 15 January 2011

Summary of Water Affected Assets			
Asset Type	Number		Last Updated
Telemetry	2		15/01/2011
Water Pump Stations & Boosters			15/1/11 20.30PM
Flooded or Without Power	0		
Customers Affected	0		
Res Levels (ML)	70.68		15/1/11 20.30PM
Water Main Bursts	3		15/1/11 20.30PM
Properties Affected	39		
PRV's	5		15/1/11 20.30PM
Trunk Mains	1		15/1/11 20.30PM
Dirty Waters	14 (0 outstanding)	0 outstanding	15/1/11 20.30PM

QUU RESERVOIRS – TIME TILL LOW LEVEL

Status	Code
More Than 5 hours supply	
Between 3 and 5 hours supply	
Less than 3 hours supply	

Location	Current Volume (ML)	Usable Volume (ML)	Current Level (m)	Est ROF Time to Low (Hrs)
Mt. Gravatt	6.35	1.76	2.63	10.07
Roles Hill 1 - Decommissioned	1.50	0.75	1.19	

Nathan - Offline	0.00	0.00	0.00	
Outlook	0.19	0.15	1.38	34.99
Grovely 2	2.34	0.96	2.03	4.51
Toohey Mt 2	2.42	1.44	2.96	31.33
Karana Downs R60M	0.44	0.00	1.09	3.62
Bracken Ridge	4.62	3.04	2.34	6.55
Highgate Hill 1	2.60	1.59	2.01	11.00
Inala	5.20	2.91	3.41	47.13
Bartleys Hill 1	6.13	3.19	4.43	22.01
Bardon Hill	1.43	0.84	1.92	19.90
Milne Hill	3.81	0.11	2.53	0.29
Highgate Hill 2	2.39	1.38	1.85	10.26
Grovely 1	0.92	0.34	1.59	5.80
The Gap	5.13	1.96	5.18	20.09
Tarragindi	36.71	17.84	3.99	15.71
Holland Park 2	1.78	1.01	2.47	6.60
Richlands	6.09	3.48	12.11	9.65
Mt Ommaney	20.34	11.30	6.75	30.83
Manly Elevated	5.92	0.27	25.13	3.36
Karana Downs R60M	1.04	0.04	2.59	1.05
Mitchelton	0.50	0.09	0.80	5.92
Stafford 2	2.75	1.90	2.26	8.86
Karawatha	1.40	0.50	2.79	2.82
Holland Park 1	0.48	0.14	2.67	3.75
Bartleys Hill 2	9.56	4.72	4.76	21.37
Roles Hill 2	5.46	0.68	3.46	9.91
Boss Rd WP30	17.37	6.83	7.70	30.81
The Summit	0.29	0.11	4.45	46.72
Boss Rd WP30	0.12	0.01	5.64	1.20
Toohey Mt 1	1.02	0.63	2.05	18.79
Manly Tank	0.47	0.06	5.66	1.94
Chapel Hill	1.30	0.64	1.29	10.40
Stafford 1	0.00	0.00	0.00	0.00
Eildon Hill - Offline	0.04	0.00	0.01	
Total Volume		70.68		

BRISBANE AREA WASTEWATER ASSETS SUMMARY

LDCC

Updated – 19:00PM Saturday, 15 January 2011

49

Pump Stations
Flooded or without
power

11

Generators
Flooded

3

Treatment Plant
Flooded or without
power

0

Generators Flooded

IPSWICH WATER ASSETS SUMMARY

LDCC

Updated - 19:00PM Saturday 15 January 2011

RESERVOIR/P	LOCATION	CAPACITY (ML)	SERVICABLE	HOLDING (%)	NOTES
Western Distribution Area Reservoirs					
Borallan			Y	57	Normal Operation
Marburg			Y	88	Normal Operation
Haigslea			Y	36	Normal Operation
Rosewood 1 & 2			Y	54/58	Normal Operation
Upper John Works at night for HLZ			Y	75	Filling
Denmark Hill			Y	44/46	Normal Operation
Karragroo			Y	56	Normal Operation
Brassall			Y	46	Normal Operation
Bundamba Distribution Area Reservoirs					
Blackstone			Y	76	Normal Operation
Ripley			Y	56	Normal Operation
Ripley HLZ Fills out of Ripley Res			Y	79	Normal Operation
Eastern Distribution Area Reservoirs					
Bundamba			Y	92/91	Normal Operation
Riverview (Child)			Y	63	Normal Operation
Goodna			Y	81	Normal Operation
Bertha Balances off of Goodna Level			Y	36	Normal Operation

Keidges Road			Y	84	Normal Operation
Keidges Road HLZ fills out of Keidges Res			Y	80	Normal Operation
Camira			Y	68	Normal Operation
Springfield			Y	84	Normal Operation

IPSWICH WASTEWATER ASSETS SUMMARY

LDC

Updated - 19:00PM Saturday 15 January 2011

PUMP STATION	LOCATION	SERVICEABLE	POWER	FLOODED
Bundamba 1 Catchment				
Moggill Ferry		Y		Y
Francis		Y		
Tantivity		N		Y
Moore's Pocket		Y		Y
Karalee A		N		N
Karalee B		N		N
Mt Crosby		N		N
Harris Street		Y		N
Harrison street		Y		N
Enterprise Street		Y		N
Rosebery Prade		N		Y
Woodend Road		N		Y
Haig Street		Y		N
Tiger Street		N		N
Tivoli Wastewater Centre		N		N
Luckie Crescent		Y		N
Boundary Street Nrth		N		N
Chermside Rd		N		
Boundary Street south		N		Y
Blackall Street		N		Y
Bundamba 2 Catchment				
Samford Road		N		N

Chalk Street		Y	N
Old Toowoomba Road		N	Y
Ivor Marsden		N	N
Okeefe		Y	Y
Hanlon Street		Y	Y
Lobb Street		N	Y
Lobley Street		N	Y
Sutton Street		N	N
Berry Street		Y	N
Winston Street		Y	N
Hall Street		Y	N
Saleyard Road		Y	N
Videroni Street		N	Y
Queen Street		Y	N
Ashburn Road		N	N
Bognuda Street		N	Y
Hudson Street		Y	N
Kennith Street		N	N
Nelson Street		Y	N

Carole Park Catchment

Cobalt Street		Y	N
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Goodna Catchment

Brisbane Terrace		N	Y
Riverview Road		Y	?
Monash Street		N	?
Six Mile Creek		N	?
Cedar Road		Y	N
Eagle Heights		Y	N
McAuliffe Street		N	N
Lower Cross Street		N	Y
Keidges Road		Y	N
Butterfly Green		Y	N
Springfield Collage Green		Y	N
Waterford Road		Y	N
Fion Street		Y	N
West St		Y	

Rosewood Catchment

School Street		Y	Y
Bassetts Lane		Y	Y

IPSWICH WASTEWATER ASSETS SUMMARY

LDCC

Updated – 19:00PM Saturday, 15 January 2011

Condition	N. Pumps
Nrmal Operation	28
Inundated but accessible	11
Inundated / Nt accessible	21

WATER RECLAMATION PLANT	NOTES
Bundamba Water Reclamation Plant	Fully accessible. Not operational.
Goodna Reclamation Plant	Accessible. No power.
Rosewood Reclamation Plant	Limited access. Operational apart from chlorination
Carole Park Reclamation Pant	Normal Operation

**LDCC Queensland Urban Utilities UPDATE 5am Sunday,
16/1/2011**

EVENT SUMMARY – SITREP 20

Status of water and sewerage assets and services

The following is a summary of current and forecast impacts.

Brisbane City Council area (as at 4.30am)

Water:

- All water pumping stations operational (one with generator set). Reservoir levels maintained during the day under flood recovery demands (street and house cleaning).
- Currently filling distribution reservoirs at Link Waters requested due to high levels in their reservoirs.

Wastewater:

- 49 sewerage pumping stations flooded or without power.
- Three wastewater treatment plants have been flooded and are not operating (Karana Downs, Oxley, Fairfield).
- No impact on residents.

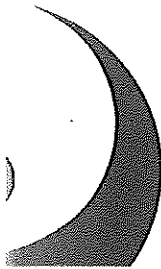
Ipswich City Council area

Water:

- No operational problems.
- Water sampling commenced, awaiting results on Sunday, 16 January.

Wastewater:

- Two wastewater treatment plants remain offline – Bundamba and Goodna.
- 31 sewerage pumping stations are not operating.
- No impact on residents.



Lockyer Valley

Water:

- Progressively filling reservoirs.
- Tanker deliveries continuing to Lowood and Gatton Reservoirs during the night.
- Postman's Ridge Pump Station operational. Repairs to supply main (Withcott) completed.
- Repairing the road for tanker access into Helidon.
- Withcott – mains to be charged on Sunday, 16 January.
- Regency Downs and Kensington Grove returning to normal operational status.

Wastewater:

- All water reclamation plants operational.
- Repairs have commenced to Main Sewer Rising Main to Gatton, which washed away.

Scenic Rim

Water and Wastewater: No issues.

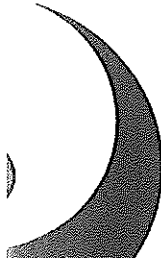
Somerset

Water:

- Lowood WTP operational and filling clear water tank, supply restored, progressively filling reservoirs.
- Esk WTP and Toogoolawah WTP returned to normal operation status.
- Minden customers reliant on bottled water.
- Power restored to Linville PS and water is being delivered to the reservoir.
- Fernvale still in supply but reliant on water tankers to maintain current levels.
- Extra crews have been arranged on standby as a contingency plan for the water supply to the affected Lockyer Valley and Somerset areas.
- A 20,000 litre tanker has been organised to deliver potable water to the Glamorgan Vale Water Board Reservoir to assist in providing an old aged care home with water. For non-potable use only.

Wastewater:

- Fernvale WRP still not accessible.
- Toogoolawah WRP returned to normal operation.
- Esk WRP now accessible, repairs expected to be completed on Sunday, 16 January.
- Lowood WRP still without power (maybe another five days).



LOCKYER VALLEY WATER ASSETS STATUS

LDCC

Updated 5am Sunday, 16 January 2011

RESERVOIR/PS	LOCATION	CAPACITY (ML)	HOLDING (%)	EST SERVICE DURATION	SERVICEABLE (Y/N)	NOTES	Status
Plainlands	Plainlands	45	4		Y		
Victoria St	Forest Hill	0.18	60	2 days	Y	Visual estimation 2m	
Summer St boosted zone, pump station and reservoir	Laidley	1.12	58	2 days	Y		Consideration of System Isolation
Douglas McInnes Drive		1.14	53		Y		
Rosewood Laidley Road Reservoir		0.45	100		Y	Can backfeed into town	
Sippel Road (Lakes Estate)		0.09	80		Y	Trickle feed to tanks	
Glenore Grove Booster					N	Only used during high demand.	Not a priority (given demand)
Gatton Reservoir - low	Woodlands Rd	5.95	0.24ML		Y		
Gatton Reservoir - high	Woodlands Rd	0.24			Y		
Gatton Reservoir - low	Cochrane St	2	1.5M visual		Y		Fencing washed away
							lightning strike
							telemetry & local control damaged (not sure of this or below)
Gatton	Cochrane	2	100		Y		Fencing

Reservoir - high	St						washed away
							lightning strike
							telemetry & local control possibly damaged.
Gatton PS		N/A			Y		Networked water supply unavailable
Helidon - Small	Seventeen Mile Road	0.7	0		Y		Networked water supply unavailable
Helidon - Large	Seventeen Mile Road	1.5	5		Y		
Millora Rd (Dobel Dr)		0.18	5		Y		
Rossiter Rd Pump Station	Rossiter Rd	N/A			N	Only two houses drawing on this system.	No Power - not used often.
Warrego Hwy PS		N/A			N	Pump Motor and Switchboard being replaced. Genset on site until 16/1	Expect operational today. JP Richardsons working on repairs to switchboard (expect 2 to 3 weeks). Gen set has arrived. Can operate manual with Gen set - only waiting on wiring in of soft starter. Motor at Donaldsons getting dried out.
Postmans Ridge	Murphy's Creek	0.33	24		N		Contractor has the main

	Ridge						reinstated. Expect serviceable by afternoon Sat 15 Jan. Waiting for a fitting to connect either end.
Postmans Ridge PS		N/A			N	No power to site. Genset on standby at Coates - now has approval to transport, 5t limit MRD approval received for this move.	Switchboard, building and auxiliary equipment is serviceable.
Withcott	Dolley's Rd	1.94	0		N	No inlet feed available due to break on 200mm DICL inlet main after pump station at Postman's Ridge. Both ends isolated.	Networked water supply unavailable - reservoir OK but empty. Expect fitting restored late afternoon Sat 15 Jan.
Withcott PS		N/A			Y	No Water	
Tabletop	Berghoffer Rd	0.003	25		Y		Plenty of water. No power. No check yet on boost pumps. Maybe ten customers on boost.
Tabletop PS					Y		

Please note: Details in this table are based on the latest information at time of publication. Due to the changing nature of the situation this table will be updated regularly.

LOCKYER VALLEY WASTEWATER STATUS

LDCC

Updated 5am Sunday, 16 January 2011

ASSET	LOCATION	STATUS	NOTES
Railway St WRP	Forest Hill	Y	
Gordon St PS (429)	Forest Hill	Y	
Railway St PS (428)	Forest Hill	Y	Operational, but standby pump is in electrical fault. Crews to address today, probably.
Treatment Plant Rd WRP	Gatton	Y	Operational - has power but no sodium hypochlorite for disinfection. Order placed but not accessible by road.
Crescent St PS (408)	Gatton	Y	
East St PS (409)	Gatton	Y	
Myler Crt PS (410)	Gatton	Y	
Lake Apex PS (411)	Gatton	Y	
Industrial Rd PS (412)	Gatton	Y	
South St PS (413)	Gatton	Y	Operational, but high float fault alarm.
Karrasch Road PS (420)	Placid Hills	Y	Operational, damaged pump now reset and OK.
Hennessy St PS (414)	Gatton	Y	
Golf Links Dve PS (415)	Gatton	Y	
Western Dve PS (416)	Gatton	Y	Duty pump OK, but standby pump is out on high amps alarm. Requires lifting.
Tew Crt PS (417)	Gatton	Y	Duty pump OK, but standby pump is out
Back Flagstone Creek Rd WRP	Helidon	Y	Operational but not accessible as yet. No mains power. Generator now running the effluent transfer pump. Awaiting supply restoration.
Airforce Rd PS (405)	Helidon	Y	

Lawlers Rd PS (406)	Helidon	Y	
Plant St PS (407)	Helidon	Y	
Boundary Rd WRP	Laidley	Y	
Kurrajong Crt PS (424)	Laidley	Y	
Stanford Pl PS (425)	Laidley	Y	
Boundary Rd PS (426)	Laidley	Y	
Hayes St PS (427)	Laidley	Y	
Alexander St PS	Laidley	Y	
Pike St PS	Laidley	Y	Operational but limited road access due to power pole over with low hanging wires. 4WD access OK. Pole fix being arranged with local Lowood contractor.
Patrick St PS (422)	Laidley	Y	Operational but limited road access
Pioneer St PS	Laidley	Y	
Storr St PS	Laidley	Y	
Vaux St PS	Laidley	Y	

WATER RECLAMATION PLANT	NOTES
Gatton WRP	Operational and Accessible
Laidley WRP	Operational and Accessible
Forest Hill WRP	Operational and Accessible
Carole Park Reclamation Pant	Not accessible but Operational

SOMERSET WATER ASSETS STATUS

LDCC

Updated 5am Sunday, 16 January 2011

RESERVOIR/P	LOCATION	CAPACITY (ML)	HOLDING (%)	EST SERVICE DURATION	SERVICEABLE (Y/N)	NOTES
Lowood 1	Jacqueline St Res 2	3			Y	Level is Critically Low but being maintained due to reliance on tankers
Lowood 2	Glamorgan Vale Rd / Ziebell	2			Y	
Lowood 3	Acacia St	1.13			Y	
Tarampa	Prenzlau Rd	0.022			N	No supply
Fernvale	Knox Rd	2	EMPTY	-	Y	Level is Critically Low but being maintained due to reliance on tankers
Balance tank/P	Fernvale	UNK			U	
Lowood West		3			Y	Networked water supply unavailable
Esk		1.1 ML	0.4		Y	To return to normal status 14/1 afternoon
BP	East St	N/A			Y	45kW soft start – 18l/s max
Toogoolawah		2	0.5		Y	To return to normal status 14/1 afternoon
Kilcoy	Saleyards Rd	3.6	?	1 day	Y	(Source: WGM) 3 tanks – 0.45, 0.63 & 1.8 ML

Lowood	WP75 Forest Hill Fernvale Road				N	Needs electrical work, went under
Lowood	WP76 Main st				Y	
Lowood	WP77 James st				Y	
Lowood	WP78 Prospect st				Y	
Lowood	WP79 Prospect st				Y	
Lowood	WP80 Prospect st				Y	
Lowood	WP81				N	Went under, needs electrical work
Lowood	WP82 Macadamia st				Y	
Lowood	WP83 Haslington park				Y	
Jimna			65	2 days	Y	(Source: WGM)
Linville		0.1	50	2 days	Y	Incorrect SCADA reading at Lowood. Manually checked (Source: WGM)

SOMERSET WASTEWATER ASSETS STATUS

LDCC

Updated 5am Sunday, 16 January 2011

WATER RECLAMATION PLANT	PREVIOUS NOTES	CURRENT STATUS
Esk WRP	Was inundated, Now accessible	Not Serviceable – No Further Information available
Fernvale WRP	Not Accessible	Not Serviceable – No Further Information available
Lowood WRP	Was inundated, Now accessible	Not Serviceable – No Further Information available
Kilcoy WRP	Not Accessible	Power Restored
Toogoolawah WRP	Not Serviceable – No Further Information available	Operational

SCENIC RIM AREA STATUS

LDCC

Updated 5am Sunday, 16 January 2011

NO ISSUES

BRISBANE AREA WATER ASSETS SUMMARY

LDCC

Updated 5am Sunday, 16 January 2011

Summary of Water Affected Assets			
Asset Type	Number		Last Updated
Telemetry	2		15/01/2011
Water Pump Stations & Boosters			15/1/11 20.30PM
Flooded or Without Power	0		
Customers Affected	0		
Res Levels (ML)	70.68		15/1/11 20.30PM
Water Main Bursts	3		15/1/11 20.30PM
Properties Affected	39		
PRV's	5		15/1/11 20.30PM
Trunk Mains	1		15/1/11 20.30PM
Dirty Waters	14 (0 outstanding)	0 outstanding	15/1/11 20.30PM

QUU RESERVOIRS – TIME TILL LOW LEVEL

Status	Code
More Than 5 hours supply	
Between 3 and 5 hours supply	
Less than 3 hours supply	

Location	Current Volume (ML)	Usable Volume (ML)	Current Level (m)	Est ROF Time to Low (Hrs)
Mt. Gravatt	6.35	1.76	2.63	10.07
Roles Hill 1.- Decommissioned	1.50	0.75	1.19	

Nathan - Offline	0.00	0.00	0.00	
Outlook	0.19	0.15	1.38	34.99
Grovely 2	2.34	0.96	2.03	4.51
Toohey Mt 2	2.42	1.44	2.96	31.33
Karana Downs R60M	0.44	0.00	1.09	3.62
Bracken Ridge	4.62	3.04	2.34	6.55
Highgate Hill 1	2.60	1.59	2.01	11.00
Inala	5.20	2.91	3.41	47.13
Bartleys Hill 1	6.13	3.19	4.43	22.01
Bardon Hill	1.43	0.84	1.92	19.90
Milne Hill	3.81	0.11	2.53	0.29
Highgate Hill 2	2.39	1.38	1.85	10.26
Grovely 1	0.92	0.34	1.59	5.30
The Gap	5.13	1.96	5.18	20.09
Tarragindi	36.71	17.84	3.99	15.71
Holland Park 2	1.78	1.01	2.47	6.60
Richlands	6.09	3.48	12.11	9.65
Mt Ommaney	20.34	11.30	6.75	30.83
Manly Elevated	5.92	0.27	25.13	3.36
Karana Downs R60M	1.04	0.04	2.59	1.05
Mitchelton	0.50	0.09	0.80	5.92
Stafford 2	2.75	1.90	2.26	8.36
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Chapel Hill	1.30	0.64	1.29	10.40
Stafford 1	0.00	0.00	0.00	0.00
Eildon Hill - Offline	0.04	0.00	0.01	
Total Volume		70.68		

BRISBANE AREA WASTEWATER ASSETS SUMMARY

LDCC

Updated 5am Sunday, 16 January 2011

49

Pump Stations
Flooded or without
power

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Generators
Flooded

3

Treatment Plant
Flooded or without
power

0

Generators Flooded

IPSWICH WATER ASSETS SUMMARY

LDCC

Updated 5am Sunday, 16 January 2011

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Rosewood 1 & 2			Y	54/58	Normal Operation
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Denmark Hill			Y	44/46	Normal Operation
Karragroo			Y	56	Normal Operation
Brassall			Y	46	Normal Operation
Bundamba Distribution Area Reservoirs					
Blackstone			Y	76	Normal Operation
Ripley			Y	56	Normal Operation
Ripley HLZ Fills out of Ripley Res			Y	79	Normal Operation
Eastern Distribution Area Reservoirs					
Bundamba			Y	92/91	Normal Operation
Riverview (Child)			Y	63	Normal Operation
Goodna			Y	81	Normal Operation
Bertha Balances off of Goodna Level			Y	36	Normal Operation

Keidges Road			Y	84	Normal Operation
Keidges Road HLZ fills out of Keidges Res			Y	80	Normal Operation
Camira			Y	68	Normal Operation
Springfield			Y	84	Normal Operation

IPSWICH WASTEWATER ASSETS SUMMARY

LDCC

Updated 5am Sunday, 16 January 2011

PUMP STATION	LOCATION	SERVICEABLE	POWER	FLOODED
Bundamba 1 Catchment				
Moggill Ferry		Y		Y
Francis		Y		
Tantivity		N		Y
Moore's Pocket		Y		Y
Karalee A		N		N
Karalee B		N		N
Mt Crosby		N		N
Harris Street		Y		N
Harrison street		Y		N
Enterprise Street		Y		N
Rosebery Prade		N		Y
Woodend Road		N		Y
Haig Street		Y		N
Tiger Street		N		N
Tivoli Wastewater Centre		N		N
Luckie Crescent		Y		N
Boundary Street Nrth		N		N
Chermside Rd		N		
Boundary Street south		N		Y
Blackall Street		N		Y
Bundamba 2 Catchment				
Samford Road		N		N