

Date	Time	TSR	Wivenhoe Dam Release (m <sup>3</sup> /s)				Gate No.	Opening (m)	Storage Level	Rainfall (mm)
			Regulators	Hydro	Gates	Total				
12/12/2010	1400	W1								
13/12/2010	1300	W2		10	290					
15/12/2010	1800	W3								
16/12/2010	1600	W4			0					
17/12/2010	1200	W5							Large storms yesterday pm and night; 20-50 forecast tonight	
17/12/2010	1800	W6	Closed						20-50 forecast o/n	
	1830			13	50	63	3	0.5		
18/12/2010	0700	W7							40-50 since 16/12/2010	
19/12/2010	0700	W8			350	350	3	3.5	20-30 upper Brisbane R.	
19/12/2010	1800	W9			300	300	3	3		
20/12/2010	0700	W10								
20/12/2010	0900	W11							68 expected this afternoon	
20/12/2010	0900	W12								
21/12/2010	0730	W13				peak 1,280 (0500)			peak 68.24 (0400); currently 68.22 (112% cap.) falling slowly currently @ 67.61 (107% cap.) falling slowly	
22/12/2010	0830	W14							none since 300 on 20/12/2010	
22/12/2010	1600	W15							Closing sequence to finish just>FSL	
23/12/2010	0800	W16							When gates closed, will be 67.2 (0.2m > FSL) & 50mm <gate opening trigger level	
23/12/2010	1430	W17			350		3	3.5	10-30 in CA over last 24 hrs.; further heavy rain expected to start on 29/12/2010	
24/12/2010	0630	W18							67.07 expected when all gates closed little or no rainfall	
24/12/2010	1330	W19	4,200MI/day from reg. & Hydro			Radial gate ops ceased @ 1300	3	zero		
25/12/2010	0930	W20							10-20 over last 24 hrs	

26/12/2010	0800 W21				Rel. minor over last 24 hrs.
27/12/2010	0800 W22				40-50 over dam CA last 24 hrs.
28/12/2010	0700 W23	347 (initially) then back to 46			20-40 over dam CA's ;ast 24 hrs
29/12/2010	0700 W24			69.26 (@ 0600) - aim is to return to FSL by 2/1/2011 69.33 peak	No/very little in last 24 hrs.
30/12/2010	0700 W25	Wivenhoe+Lockyer = 1,600m <sup>3</sup> /s		yesterday @ 1200 (2.3m > FSL) 69.07 this am	No/very little in last 24 hrs.
31/12/2010	0700 W26 W27	Wivenhoe+Lockyer = 1,600m <sup>3</sup> /s		68.4 @ 0500	No/very little in last 24 hrs.
6/01/2011	1200 W28	Commence opening RG @ 1800 & ramp up to 300m <sup>3</sup> /s by 2200		67.31 @ 0700	20-30 widespread with up to 50 on dam CA's
7/01/2011	0700 W29			67.64 @ 0600	30-50 with isolated falls up to 75; signif. Rain on Lock. Ck.
7/01/2011	1500 W30	Release started 1500 to be incr. slowly to ~1,200m <sup>3</sup> /s by 1400 tomorrow			
8/01/2011	0700 W31	~890	All (5) RG's open	68.45 @ 0600 rising steadily	Widespread rain 20-40 over dam CA's since 0900 yesterday; further high rainfall predicted for next 4 days
9/01/2011	0700 W32 W33		1,343	Currently 68.58 (falling slowly)	For last 12 hrs. av. of 40 for Somerset CA & <10 for Wivenhoe CA
9/01/2011	2100 W34		1,400	Currently @ 69.1;	Very heavy rainfall -totals for 24 hrs 100 - 300; Severe weather warning for heavy rainfall

W35  
W36  
W37

11/01/2011	0630 W38	2,750 since 1930 on 10/1/2011	All (5) gates	73.51 rising @ 25mm/hr.	20-60 last 12 hrs in Lockyer CA; 30 in Bremer R.; Isol. Falls of 125 in upper Brisbane R. & widespread falls of 40 - 70 in Somerset CA
11/01/2011	1200 W39	3,970		74.1 (179.5% cap.) rising @ 25mm/hr.	

Comments	Crossing Closures
<p>45,000MI from Somerset; WL Somerset to peak at 99.7 on 13/12/2010; 150m<sup>3</sup>/s expected through Brisbane; 30,000MI expected into Wivenhoe from upper Brisbane R.; peak WL in Wivenhoe expected to be 67.6; Releases expected from Wivenhoe on afternoon of 13/12/2010 ramping up to 300m<sup>3</sup>/s; Reg. will be closed &amp; Gate 3 opened to 3m to get WL back to 67.25; Incr. release will impact on 3 crossings; Dam Regulator informed</p> <p>138m<sup>3</sup>/s from Somerset;</p> <p>Releases from Wivenhoe will cease on 16/12/2010; Hydro will continue during fish recovery ops.</p> <p>Gate closed 1000</p> <p>Decision to commence a release tonight was made this am by Duty Flood Engineers to provide as much notice to impacted Councils as possible; 60,000MI needs to be released from Wivenhoe &amp; Somerset to maintain FSL</p> <p>Need to release &gt;60,000MI from Wivenhoe &amp; Somerset to achieve FSL</p> <p>Releases could increase to 300m<sup>3</sup>/s;</p>	<p>Gate release will impact on 3 crossings</p> <p>Would impact Twin Bridges, Savages Crossing, Colleges Crossing</p>
<p>100,000MI to be drained in next 4 days; Q Brisbane R. to be maintained at 300-350m<sup>3</sup>/s; Transfer from Somerset via 2 reg.; Wivenhoe Q incr. to 150m<sup>3</sup>/s o/n; Will incr. further to 300m<sup>3</sup>/s as Q Lock.Ck. Subside over next 24 hrs.; Q Lock.Ck. Currently 130m<sup>3</sup>/s 12,000MI/day from Somerset; Release expected until 22/12/2010;</p> <p>Somerset rel. steady (Q reg.=140m<sup>3</sup>/s); Q Wivenhoe to be maintained at 300m<sup>3</sup>/s (Lock.Ck. Permitting) to allow Burtons Bridge to remain open; WL Wivenhoe expected to incr. to 67.4 over next 2 days;</p> <p>Somerset risen to 100.2 - sluice gate releases to be made until am of 22/12/2010 when FSL expected; WL Wivenhoe at 68 expected this pm; Q Wivenhoe expected to be &gt;1,200m<sup>3</sup>/s - discuss with impacted Cncls.- strategy decision by 10000; Wivenhoe inflows excl. Q Somerset peak tomorrow at 1800m<sup>3</sup>/s</p> <p>Inflow to Somerset to peak today at 700m<sup>3</sup>/s; Somerset &amp; Wivenhoe currently storing 140,000MI above FSL; further inflows occurring; releases to be incr. o/n to ~1,200m<sup>3</sup>/s; various Cncls. Given heads up; BOM advised</p> <p>Same as W11</p> <p>410m<sup>3</sup>/s from Somerset sluice gates; Somerset peaked @100.43 (1300 on 20/12/2010), currently @ 100.23 (114% of cap.); 110,700MI Inflow to Somerset, 67,500MI discharged into Wivenhoe; Wivenhoe inflow (excl. Somerset releases) = 157,900MI, 103,000MI released; Total Inflow to both dams ~310,000MI; Continued gate operations may be necessary if forecast rainfall results in subsequent river rises</p>	<p>Twin Bridges &amp; Savages Crossing currently closed; Colleges Crossing to be impacted in afternoon</p> <p>Twin Bridges, Savages Crossing, Colleges Crossing currently closed</p> <p>Twin Bridges, Savages Crossing and Colleges Crossing are closed; closing of Burtons Bridge and Kholo Bridge will be considered if more rain or inflows</p> <p>Both Burtons and Kholo bridges likely to be inundated</p> <p>Wivenhoe releases reduced slightly to keep Burtons Bridge open - then incr. releases after Somerset RegnlCncl inform residents affected by Burtons Bridge</p> <p>Kholo Bridge is also expected to be inundated by mid-morning ; In accordance with the adopted operational strategy these bridges should be back in service by late Thursday and all bridges (with the possible exception of Twin Bridges) should be trafficable for Christmas providing no further rainfall occurs.</p>
<p>410m<sup>3</sup>/s from Somerset sluice gates; Somerset currently @ 99.68 (108% cap.); 121,500MI inflow to Somerset, 103,000MI released to Wivenhoe; Gate Ops. @ Wivenhoe; High tides expected to coincide with peak levels in Brisbane R.</p> <p>BOM aware of all releases</p> <p>1 sluice open @ Somerset to be closed @ 0900 - WL will be 0.1m&gt; FSL; Est. Inflow to Somerset 135,000ML, majority discharged into Wivenhoe; Gate closure ops @ Wivenhoe in progress; Wivenhoe inflow (excl. Somerset inflow) = 204,000MI; A total of 324,000MI has been released; Contd. gate ops may be necessary if forecast rain results in river rises; Gate closure ops sequence to be reviewed</p>	<p>Burtons Bridge &amp; Kholo Bridge expected to be back in service by 23-24/12/2010; All bridges expected to be trafficable by Xmas provided no further rain</p> <p>Gate closing sequence to allow bridges to be accessible</p> <p>Projected crossing openings: Burtons Bridge – 18:00 Thursday 23 December 2010. Savages Crossing – 19:00 Thursday 23 December 2010 Kholo Bridge – 21:00 Thursday 23 December 2010 Colleges Crossing – 08:00 Friday 23 December 2010</p>
<p>Somerset gate ops ceased @ 0900, WL @ 99.1; Gate closure sequence extended to pm of 24/12/2010; Contd. Gate ops may be necessary if forecast rainfall gives incr. river levels</p> <p>Gate ops @ Somerset ceased yesterday, reg. to be opened to bring lake to FSL; Gate ops continuing @ Wivenhoe -1 gate incr. every 5-6 hrs to ensure Brisbane R. Q not incr. due to incr. Lock. Ck. Outflows &amp; maintain Burtons Bridge open;</p>	<p>Projected crossing openings: Burtons Bridge – 18:00 Thursday 23 December 2010, Kholo Bridge - 21:00 Thursday 23 December 2010; Other bridges expected to remain closed until Xmas Day</p> <p>Twin Bridges, Savages Crossing and Colleges Crossing are currently closed and should remain so for some time due in part to current outflows into the Brisbane River from Lockyer Creek that will peak in excess of 200 cumecs late today.</p>
<p>Flood Centre to monitor o/n &amp; consider options tomorrow am based on inflows &amp; rainfall; further gate ops may be necessary in coming days</p> <p>Somerset WL incr. from 99.18 yesterday @ 0600 to 99.33 @ 0730 today; 99.5 tomorrow if no gate ops.; Wivenhoe currently 4,200MI through hydro &amp; reg.; 15,00MI expected just from upper Brisbane R. in next few days; WL cont. to fall in Lock. Ck; Small rises expected in Bremer &amp; Warrill systems; WL in Wivenhoe incr. to 67.28 @ 600</p>	<p>Twin Bridges, Savages Crossing and Colleges Crossing may still be affected by flows from the Lockyer.</p> <p>Twin Bridges, Savages and Colleges Crossing remain impacted by Wivenhoe releases and Lockyer and local runoff. Burtons and Kholo Bridges would be currently unaffected. Kholo will no doubt still be closed by Council regarding repairs.</p>

BOM issued severe weather warning @ 0 445; Somerset WL incr. to 99.46 (0.46m > FSL) - 2 regs. To be opened today (140m<sup>3</sup>/s); Wivenhoe WL incr. to 67.37 (0.37m > FSL); RG to be opened later today following discussions with local authorities; further gate ops may be necessary if rainfall incr. river levels

BOM continues with severe weather warning & widespread rainfall over dam CA's; 2 regs. @ Somerset giving 139m<sup>3</sup>/s release, lake contd. To rise to 99.6 (0.6m > FSL); RG ops @ Wivenhoe commenced yesterday @ 0900, WL contd. To rise to 67.57 (0.57m > FSL); Q|Wivenhoe reduced o/n because of incr. Q|Lockyer to ensure Burtons Bridge remains open; RG @ Wivenhoe wound back as Q|Lockyer incr. > 250m<sup>3</sup>/s; Q|Lockyer expected to peak > 500m<sup>3</sup>/s later today/tomorrow - will inundate Burtons Bridge; When this happens, Q|Wivenhoe will be incr. to get WL back to FSL; further gate ops may be necessary in coming days

Sever weather warning no longer current; Somerset release through regs' ~ 208m<sup>3</sup>/s; WL|Somerset incr. to 99.96 (0.96m > FSL) - inflows decreasing; RG opening dependent on Q|Lockyer; Wivenhoe WL currently @ 68.55 (1.55m > FSL); Inflows to Wivenhoe decr.

Further 2 sluices opened @ Somerset; WL @ Somerset 99.83 & falling slowly, 2 sluices to be closed @ 1200; Intended to incr. Wivenhoe releases so Q|Wivenhoe+Q|Lockyer maintained @ 1,600m<sup>3</sup>/s (similar Q to mid Oct & mid Dec 2010)

2 sluices @ Somerset remain open (405m<sup>3</sup>/s) - FSL expected by 6/1/2011; RG closing sequence expected to start mid tomorrow - RG expected to be closed on 2/1/2011

WL @ Somerset 99.01 (falling from peak of 100.0 - 1200 28/12/2010) - currently 2 regs;

Somerset @ 99.34 (0.34m > FSL) & rising slowly; Wivenhoe 67.31 (0.31m > FSL) & rising slowly; Gates will be opened in next 24 hrs; Lockyer Ck peak of about 100m<sup>3</sup>/s Friday afternoon

100-200mm rain forecast for SE Qld next 5 days; Somerset WL @ 99.58 (0.59m > FSL) rising slowly - currently releasing 35m<sup>3</sup>/s; Wivenhoe WL @ 67.64 (0.64m > FSL & > gate trigger level) rising slowly; u/s of dam river levels peaked @ Linville and Gregors Ck gauges; A peak of about 470 cumecs is expected from Lockyer Creek by mid-afternoon; Wivenhoe gate releases will occur after the impact of Lockyer flows on Burtons Bridge has been ascertained and flood levels in the lower Lockyer subside Q|Wivenhoe may be as high as 1,200m<sup>3</sup>/s

Somerset releasing 35m<sup>3</sup>/s; 50,000MI into Somerset; Gate release @ Wivenhoe - strategy to be reviewed tomorrow (dependent on further rainfall)

Somerset WL @ 100.42 & rising (0500) - 1 open sluice gate; Water temp. held in Wivenhoe - strategy may need to be reviewed (depend. On confidence in estimates of Wivenhoe inflows); Intended to ramp Wivenhoe up to 1,200m<sup>3</sup>/s by 1200 - likely to be incr. next week; since 2/1/2011, ~200,000MI has flowed into Wivenhoe (incl. Somerset releases), further 180,000MI expected based on recorded rainfall; ~ 50,000MI released via reg. & hydro (@50m<sup>3</sup>/s)

Somerset currently @ 100.27 - 60mm rain in last 2 hrs will cause significant inflow later today; 405m<sup>3</sup>/s being released into Wivenhoe; maintain combined Q of 1,600m<sup>3</sup>/s in mid-Brisbane R.

Not included

Somerset @ 101.68 rising quickly; 5 sluice gates open releasing ~1,100m<sup>3</sup>/s; WL expected to reach 103.5 by am 11/1/2011; River levels u/s Wivenhoe rising fast; Q|Brisbane R. @ Gregors Ck @ 6,700m<sup>3</sup>/s; Wivenhoe expected to reach 73.0 by 11/1/2011 - need to incr. Q|Wivenhoe am of 10/1/2011 - crank up to 2,600m<sup>3</sup>/s by am 11/1/2011; Attempt to keep combined Q < 3,500m<sup>3</sup>/s - < limit of urban damages in the City

Crossings downstream of the dam are currently impacted primarily by non-controlled river flows only (no RG releases from Wivenhoe). Lockyer Creek outflows into the Brisbane River are currently in the order of 60m<sup>3</sup>/s. Twin Bridges, Savages and Colleges Crossings will be inundated but the plan is to release around 300-350m<sup>3</sup>/s depending on flows downstream so as to not impact Burtons Bridge.

Twin Bridges, Savages Crossing and Colleges Crossing currently closed; Burtons Bridge is currently open, but will be closed later today/tomorrow; Kholo Bridge remains unserviceable due to flood damage; No current expectation that either Mt Crosby Weir Bridge or Fernvale Bridge will be impacted by the current event; An updated estimate of the time of closure of Burtons Bridge this afternoon will be provided to Council RG discharge dropped back to 46m<sup>3</sup>/s to ensure Burtons Bridge can remain open; Twin Bridges, Savages Crossing, Colleges Crossing, Burtons Bridge and Kholo Bridge are currently closed; No current expectation that either Mt Crosby Weir Bridge or Fernvale Bridge will be impacted by the current event; Lockyer Creek outflows being closely monitored and may come close to impacting upon the Mt Crosby Weir Bridge; England Creek access is not impacted yet

Twin Bridges, Savages Crossing, Colleges Crossing, Burtons Bridge and Kholo Bridge are currently closed; no current expectation that Mt Crosby Weir Bridge or Fernvale Bridge will be impacted by current event. At this stage, estimated that the flow at Burtons Bridge will fall below the bridge deck on Sunday morning.

Twin Bridges, Savages Crossing, Colleges Crossing, Burtons Bridge and Kholo Bridge are currently closed

Twin Bridges, Savages Crossing, Colleges Crossing, Burtons Bridge and Kholo Bridge are currently closed due to inundation

Not included

Lockyer Ck peak of about 100m<sup>3</sup>/s Friday afternoon. This will take out Twin Bridges and nearly inundate Savages Crossing. Colleges Crossing could be taken out by a combined Lockyer and local runoff. Current strategy is to keep Burton Bridge free. Gate release would limit mid-Brisbane Q to 400m<sup>3</sup>/s ((Burtons capacity 450m<sup>3</sup>/s).

Q|Lockyer may be of sufficient magnitude to inundate Burtons Bridge; Somerset Regional Council, Ipswich City Council and Brisbane City Council have been advised of the potential for gate operations during the next 24 hours; The relatively high Lockyer flows will adversely impact upon Twin Bridges, Savages Crossing, and Colleges Crossing for several days, may also later impact upon Burtons Bridge & Kholo Bridge; not expected to be any adverse impacts upon Fernvale Bridge or Mt Crosby Weir Bridge; Councils have been advised of this strategy and are contacting residents

All of the crossings downstream of Wivenhoe with the exception of Fernvale and Mt Crosby Weir Bridge will be adversely impacted; Councils have been advised of this strategy and are contacting residents

The projected Wivenhoe release of 1,200m<sup>3</sup>/s combined with Lockyer flows and local runoff will mean that all crossings downstream of Wivenhoe (Twin Bridges, Savages Crossing, Burtons Bridge, Kholo Bridge and Colleges Crossing) will be adversely impacted for several days. At this stage Fernvale and Mt Crosby Weir Bridge are not expected to be affected but they could potentially be affected if the predicted rainfall totals eventuate.

The current Wivenhoe Dam release combined with Lockyer flows and local runoff will mean that all low level crossings downstream of Wivenhoe (Twin Bridges, Savages Crossing, Burtons Bridge, Kholo Bridge and Colleges Crossing) will be adversely impacted until at least Wednesday 12 January. At this stage Fernvale and Mt Crosby Weir Bridge are not expected to be affected, but this may be revised if the predicted rainfall totals eventuate and higher releases from Wivenhoe Dam are considered necessary. Cncls advised of Wivenhoe op. strategy

The projected Wivenhoe Dam releases combined with Lockyer flows and local runoff will mean that all crossings downstream of Wivenhoe (Twin Bridges, Fernvale, Savages Crossing, Burtons Bridge, Kholo Bridge, Mt Crosby Weir and Colleges Crossing) will be adversely impacted until at least Saturday 15 January in varying degrees; Water levels in the lower Brisbane R will be impacted by the combined flows of Lockyer Ck, Bremer River, local runoff and releases from Wivenhoe Dam

Not included

Not included

Not included

Somerset WL @ 103.27 & falling slowly ; currently 1,400m<sup>3</sup>/s released to Wivenhoe- to be reduced to 500m<sup>3</sup>/s later in the day - to ensure flood mitigation of Somerset & Wivenhoe are maximized; BOM provided advice on flash flooding in Lockyer Ck.; WL in Wivenhoe will reach 74 by evening; May need to increase Q further - may result in Q | lower Brisbane R. >5,000m<sup>3</sup>/s

Somerset @ 103.3 & rising; Outflows into the Brisbane River from both Lockyer Creek and the Bremer River are also increasing; If no further rain, can hold @ 74.8 - aim is to prevent fuse plug triggering, situation assessed every 3 hrs.; Heavy rainfall continues throughout South East Queensland and the situation could deteriorate over the next 24 hours. The flood operation centre will continue to monitor the situation and provide situation reports every six hours until the situation stabilizes.

The projected Wivenhoe Dam releases combined with Lockyer Creek flows and local runoff will mean that all crossings downstream of Wivenhoe (Twin Bridges, Fernvale, Savages Crossing, Burtons Bridge, Kholo Bridge, Mt Crosby Weir and Colleges Crossing) will be adversely impacted; Water levels in the lower Brisbane River will be impacted by the combined flows of Lockyer Creek, Bremer River, local runoff and releases from Wivenhoe Dam.