

WaterNSW

NAMOI River Operations
Stakeholder Consultation
Committee (ROSCCO)

Are minimum inflows included in the Resource Assessment process (RA) and distributed for use?

Resource Assessment Extract



1 July 2019

New balances	Budget	Current	Additional	Balance
	GL	GL	GL	GL
Storage Losses	18.93	9.92	0.34	10.26
Essential Supplies	58.24	0.00	0.00	0.00
Upper Namoi (11.4GL max)		2.77	0.00	2.77
Delivery Losses	0.83	0.00	0.00	0.00
LN General Security (491.8GL max)		0.00	0.00	0.00
Peel Trade Account	0.00	0.00	0.00	0.00
Uncommitted resources	-	0.34	-0.34	0.00
Total	-	13.04	0.00	13.04

The key piece of information here is

Essential Supplies,

and its limit of 58.24GL

Essential Supplies



Essential supplies is made up of

2 years supply for

- Minimum releases
- Stock and Domestic
- High security
- Local Water Utility
- Replenishment flow
- Loss to deliver all of the above

The total volume required for all Essential supplies is **126.04 GL**

1 year supply for

- Bulk Water Transfer Loss
- Walgett minimum flow

Essential Supplies



- The total volume required for all Essential supplies is **126.04 GL**
- The minimum 24 month inflow of 67.8 GL is subtracted from 126.04 GL to arrive at the account limit of 58.24 GL for essential supplies.
- This frees the 67.8 GL of minimum inflow up for distribution to other (general security) accounts.

July 2019 NAMOI RESOURCE ASSESSMENT

Previous Assessment: 30 Jun, 2019
Current Assessment: 31 Jul, 2019 GL



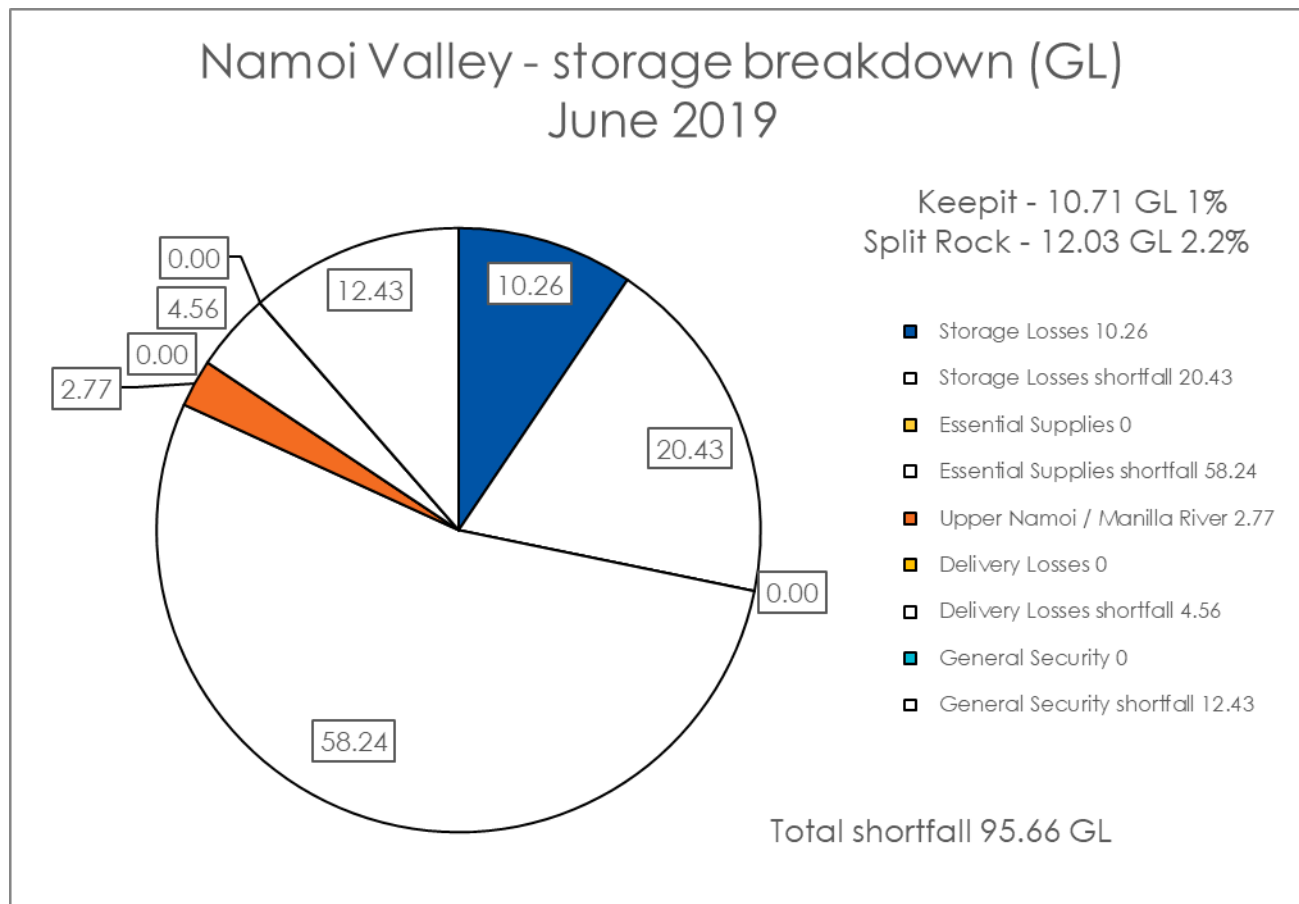
Storage volume			
Split Rock Dam		11.78	
Keepit Dam		10.81	
Total Storage			22.59
Dead storage (both dams)		9.70	12.89
Storage Loss Committed (projected 2 years)		10.26	2.63
Essential Supplies			
Brought forward		0.00	
Used and associated loss since last assessment		0.00	
Allocation Assignments from High Security to General Security		0.00	
Transfer to General Security delivery loss account		0.00	
Current balance		0.00	2.63
Upper Namoi/Murrumbidgee Rivers			
Brought forward		2.77	
Ordered since last assessment		-0.13	
Allocation Assignments from Upper Namoi to Lower Namoi		0.00	
Current balance		2.64	-0.01
General Security (D/S Keepit)			
Brought forward		0.00	
Ordered since last assessment		0.00	
Allocation Assignments into Lower Namoi (from HS, UN & Peel trade)		0.00	
Current balance		12.30	-12.31
Peel Trade Account			
Brought forward		0.00	
Traded to general security since last assessment		0.00	
Current balance		0.00	-12.31
Delivery Loss			
Brought forward		0.00	
Apparent Losses since last assessment		-0.14	
Credit from Essential Supplies (for Allocation Assignments to GS)		0.00	
Current balance (Max 30% of GS)		0.00	-12.31
Apparent Losses since last assessment			0.14
Essential Supply Loss	0%		0.00
General Security Loss	100%		0.14
Resources available for sharing			-12.31

New balances	Budget	Current	Additional	Balance
	GL	GL	GL	GL
Storage Losses	18.91	10.26	-0.01	10.25
Essential Supplies	58.24	0.00	0.00	0.00
Upper Namoi (11.4GL max)		2.64	0.00	2.64
Delivery Losses	4.48	0.00	0.00	0.00
LN General Security (491.8GL max)		12.30	0.00	12.30
Peel Trade Account	0.00	0.00	0.00	0.00
Uncommitted resources	-	-12.31	0.01	-12.30
Total	-	12.89	0.00	12.89

Recommendations Upper Namoi			
General Security Incremental Increase	0.00	GL	
Available Water Determination	0.0000	ML per unit share	
Recommendations Lower Namoi			
General Security Incremental Increase	0.00	GL	
Available Water Determination	0.0000	ML per unit share	

Current Resources Breakdown

1 July 2019



An additional 95.66GL inflow is required prior to making any new general security AWD

Temporary Water Restriction (March 2019)

Did it deliver the outcomes that were expected?

System losses

Upper Namoi Water Year Summaries (units are GL)					
	06-07 Water Year	07-08 Water Year	09-10 Water Year	15-16 Water Year	18-19 Water Year
Volume in Split Rock at start of water year	78	13.1	21.2	27.7	59.9
General Security Allocations	100%	50% from 8th Feb	50%	60%	100%
Split Rock Releases	64.3 (incl ~53.4GL BWT) 10.9	4.7 (3.3 from 8th feb)	7.7	8.1	47.7 (incl 34.9GL BWT) 12.8
Water Orders	4.4	1.2	2.9	4.3	5.2
Usage (all categories)	5.5	2	3.8	4.1	6.4
Volume in Split Rock at end of water year	13.1	24.6	13.6	24.3	12
Namoi @ North Cuerindi Flow	19	129	48.8	75	1
Namoi @ Manilla Flow	80	133	48.1	98	42.4

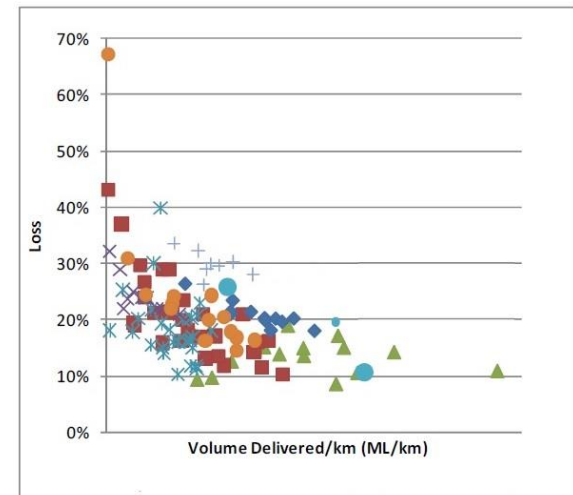
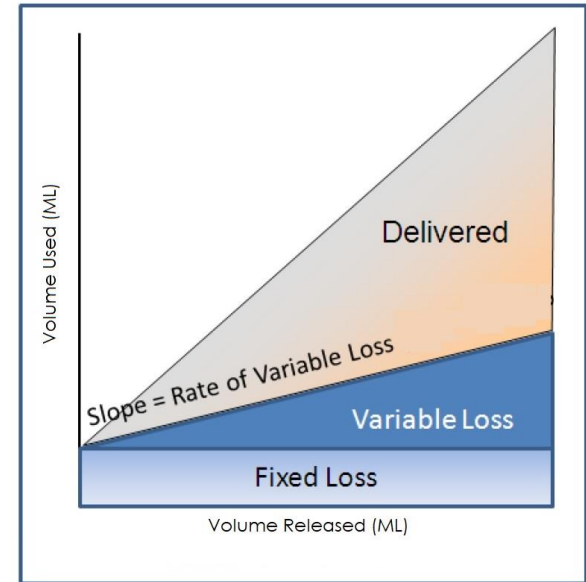
- From 1st Jan 19 to 30 Jun 19
 - released 8.5 GL for 2.8 GL of orders

Upper Namoi

- Discussion
 - Critical needs
 - Feedback (including TRC, DPIE)
 - Investigations and Infrastructure
 - Temp weir, tanks
 - Dead storage
 - Carting
 - Bathymetric survey
 - Likely that customers will run out of available account water
 - EOI to clarify needs
 - Currently continue with deliveries

Delivery Losses in general

- Running the river involve two types of losses – fixed loss and variable loss (see graph 1), and
- Delivery losses increase as the volume delivered per kilometre declines to small values (see graph 2)
- Hence the block deliveries (as in Oct-Dec 2018) to keep losses as low as possible



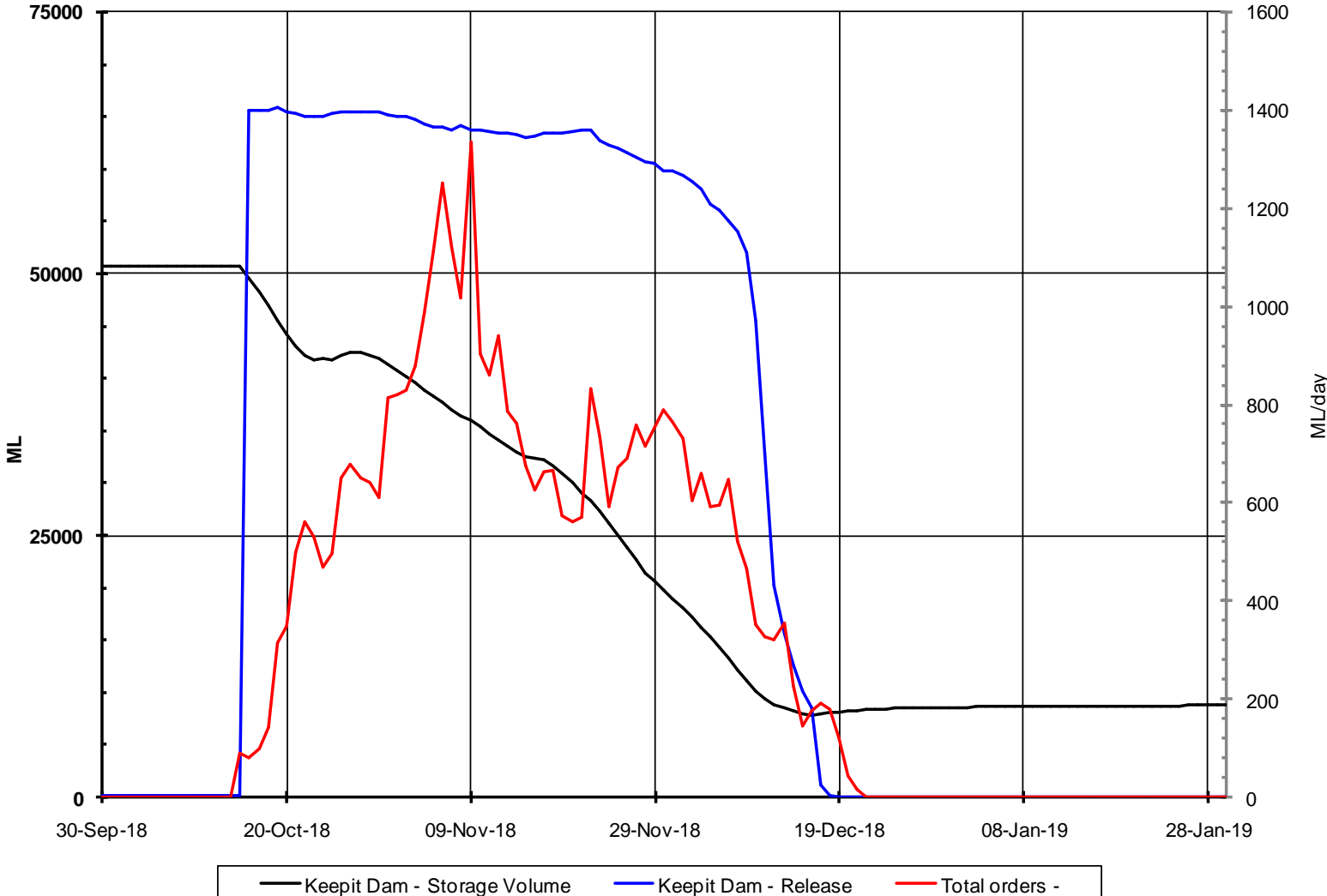
Lower Namoi Block delivery Oct-Dec 2018

- Releases commenced 15 October 2018 and continued for 62 days
- A total of 76,692 ML was released
- A total of 40,197ML was delivered
- This represents 91% delivery loss (losses/deliveries)

Loss

- Keepit to Gunnedah – 13,052
- Gunnedah to Boggabri – 4,658
- Boggabri to Narrabri – 4,741
- Narrabri to Mollee – 5,020
- Mollee to Gunidgera – 2,310
- Pian Creek – 6,805

Lower Namoi Block delivery Oct-Dec 2018



Inflows March 2019

System inflow

- 67mm rainfall recorded at Keepit dam – this was fairly widespread with some isolated pockets of higher rainfall
- Carole Gap recorded flow 1,626ML over 7 days commencing 30 March
- Gunnedah recorded flow 568ML over 7 days commencing 30 March
- Cox's creek contribution 3,549ML flow over 7 days commencing 30 March
- Namoi River at Boggabri 3,342ML flow over 7 days commencing 30 March – flow was consistent with Cox's creek
- Namoi River at Narrabri 2,268ML flow over 7 days commencing 31 March (some limited high security take, less than 100ML)
- Namoi River d/s Mollee 2,342ML – flow was consistent with Narrabri, though the shape of the flow had changed significantly by this stage from the peaky flow at Boggabri (4,000ML/day peak) to a much flatter shape (1,500ML/day peak at Mollee)
- Namoi River downstream of Gunidgera 1,114ML commencing 3 April
- Namoi River downstream of Weeta 787 ML over 7 days commencing 4 April¹⁷

Inflows March 2019

- The small volume passing Gunidgera Weir did provide connectivity to the Brigalow creek junction where most downstream inflows arrived.
- The upstream contribution added to the overall event volume and extended the tail of the event in downstream sections.
- The Walgett Namoi town weir filled however the Barwon weir did not fill.
- At Walgett this broke a period of 373 days of no flow.
- The upstream flow can be seen arriving at Bullawa gauge 7 days after commencement of flows from downstream tributaries.
- The gap was slightly longer 9 days at Goangra and Walgett as the downstream tributary flows with a high peak, passed relatively quickly through the system.

Period 23 Day 09/04/2019 to 02/05/2019

2019

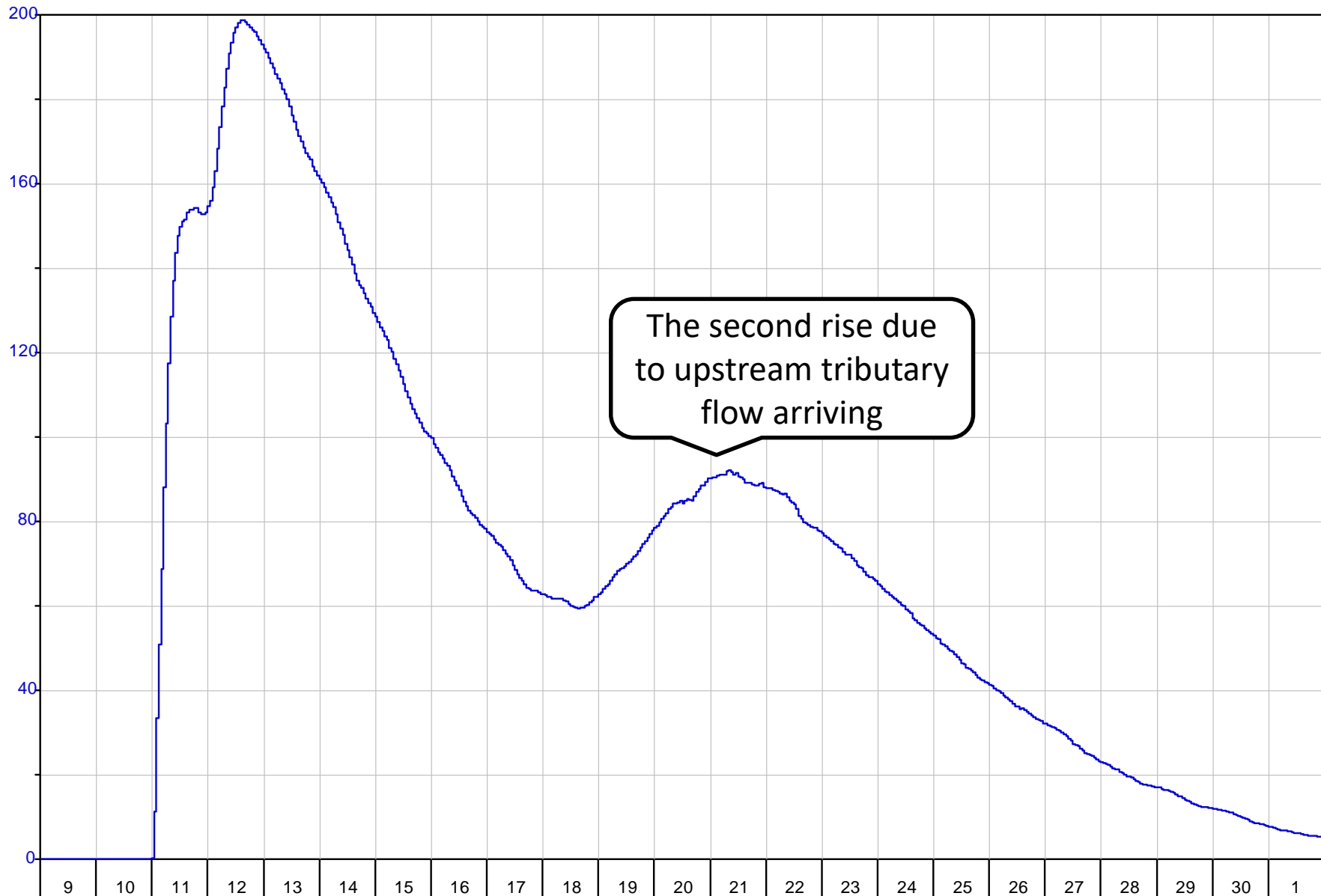
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NAMOI @ U/S WALGETT

141.00 1 Hour Mean

Discharge (ML/d)

CP

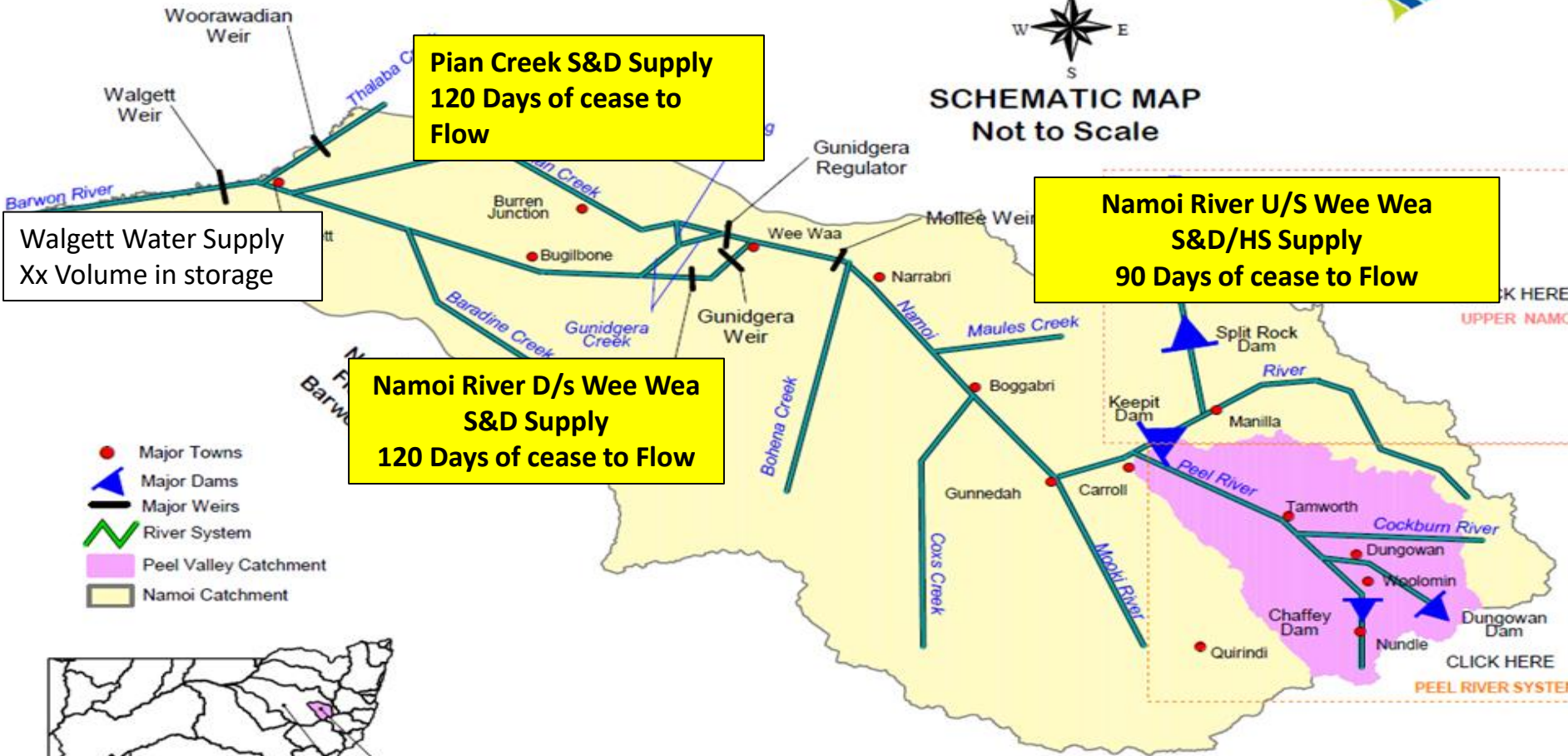


Temporary Water Restriction

How do we break up the system moving forward and set criteria for restrictions?



SCHEMATIC MAP
Not to Scale



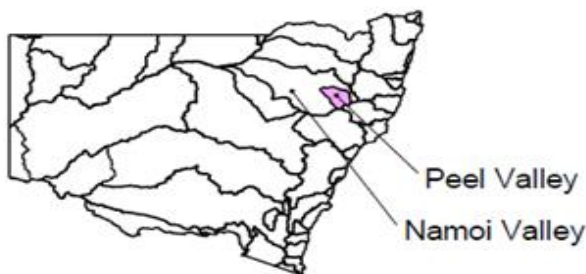
Walgett Water Supply
Xx Volume in storage

Pian Creek S&D Supply
120 Days of cease to Flow

Namoi River U/S Wee Waa
S&D/HS Supply
90 Days of cease to Flow

Namoi River D/s Wee Waa
S&D Supply
120 Days of cease to Flow

- Major Towns
- ▲ Major Dams
- Major Weirs
- ↗ River System
- Peel Valley Catchment
- Namoi Catchment



LOCALITY MAP

NAMOI RIVER SYSTEM

WaterNSW
May 2016

Develop Criteria for Local Protection

- How should the river be broken up?
 - Single section
 - Keepit to Gunidgera, Gunidgera to Walgett Pian
- How long is the stretch of low flow before protection should be put in place to secure water for Stock and Domestic?
- What does water security look like at Walgett?

Thank you for
joining us today