



# **Mary Basin ROP**

*Interim Program*

**Lower Mary River  
Water Supply Scheme**

**March 2012**

## Introduction

The *Mary Basin Resource Operations Plan* (ROP) commenced in September 2011, representing the implementation tool for the objectives and outcomes specified in the *Water Resource (Mary Basin) Plan 2006*.

Through the Mary Basin ROP SunWater has been granted a Resource Operations License (ROL) for the Lower Mary River Water Supply Scheme (WSS). As the ROL holder, SunWater is obliged to comply with the arrangements contained in the ROP relating to:

- Operation of infrastructure and management of water use;
- Trading of water allocations; and
- Water and ecosystem monitoring and reporting.

Where SunWater is unable to meet these obligations an implementation process is provided in the ROP that requires the submission of a **Statement of Current Programs** (approved on 22 December 2011) and the subsequent submission of an **Interim Program** describing how the requirements of the ROP will be met.

Consistent with this provision, this document details the proposed program through which SunWater will undertake a series of scheduled stages in progressing towards full implementation of the requirements in the ROP.

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Table 1. SunWater's activities in relation to specific ROL holder responsibilities

Section Description	Program to Meet ROP Requirements	Timing	Interim Methods
<b>Section 10 – Metering</b>	There are no unmetered works within the Lower Mary River WSS.	N/A	N/A
<b>Section 11 – Departmental water monitoring data collection standard</b>	No program required as SunWater is meeting ROP requirements in terms of time series data and water quantity data.  SunWater complies with the requirements of the data collection standard for water quality data except for pH and Total Sulphides. These have previously been discussed with and accepted by the Department.	N/A	N/A
<b>Section 12 – Departmental water monitoring data reporting standard</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Chapter 5</b>	<b>Critical Water Supply Strategy</b>		
<b>Section 55 – Water sharing and infrastructure operating rules for water managed under resource operations licence</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 56 – Requirements for preparation of critical water supply arrangements</b>	Currently there are no Critical Water Sharing Arrangements (CWSA) for the Lower Mary River WSS. SunWater will develop CWSA for submission to DERM within 12 months of the ROP commencement.	5 September 2012	SunWater will operate as per the requirements of section 108 of the ROP until such time the CWSA is approved.
<b>Chapter 8</b>	<b>Lower Mary River Water Supply Scheme</b>		
<b>Section 104 – Use of watercourses for distribution</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 105 – Operating level of storages</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 106 - Change in rate of release from infrastructure</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A

Section Description	Program to Meet ROP Requirements	Timing	Interim Methods
<b>Section 107 – Operation of Mary Barrage and Tinana Barrage fishways</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 108 – Prohibition on taking water</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 109 – Announced allocation</b>	Will meet ROP requirements	1 July 2012	SunWater is currently operating under the Lower Mary River Interim Resource Operations Licence (IROL) in regards to the Announced Allocation.
<b>Section 110 – Calculation of Announced Allocations</b>	Will meet ROP requirements	1 July 2012	SunWater is currently operating under the Lower Mary River IROL in regards to the Announced Allocation.
<b>Section 111 – Taking water under a water allocation</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 112 – Critical water supply arrangements</b>	Currently there are no Critical Water Sharing Arrangements (CWSA) for the Lower Mary River WSS. SunWater will develop CWSA for submission to DERM within 12 months of the ROP commencement.	5 September 2012	SunWater will operate as per the requirements of section 108 of the ROP until such time the CWSA is approved.
<b>Section 113 – Rules for bulk transfer to the Teddington Weir Water Supply Scheme</b>	Will Meet ROP requirements	1 July 2012	SunWater is currently operating under the Lower Mary River WSS IROL procedures in regards to the bulk transfer of water into the Teddington Weir Water Supply Scheme.
<b>Section 119 – Maximum water use</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 120 – Seasonal water assignment rules</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 121 – Interscheme trading and bulk water transfer agreement</b>	SunWater is in discussion with Wide Bay Water Corporation (Teddington Weir ROL holder) in relation to the development of an interscheme trading and bulk water transfer agreement. An agreement is still being finalised between parties.	SunWater aims to conclude the agreement with Wide Bay Water Corporation as soon as possible.	SunWater is currently operating under the Lower Mary River WSS IROL in regards to provisions outlined in section 121.
<b>Chapter 13</b>	<b>Resource operations licence holder monitoring and reporting</b>		
<b>Section 201 – Monitoring data must be made available</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A

Section Description	Program to Meet ROP Requirements	Timing	Interim Methods
<b>Section 202 – Stream flow and storage water level data</b>	<p>Mary Barrage Headwater and Tinana Barrage Headwater have continuous time series recording installed.</p> <p>As per SunWater's submission to the Department on 31 October 2011 (Attachment 1), continuous time series flow data monitoring recording is installed for Mary Barrage Inflow. This is a DERM gauging station.</p> <p>Also included in SunWater's submission was a methodology to estimate inflows into Tinana Barrage. This methodology has not yet been approved by the department. SunWater will begin recording as per the inflow derivation technique upon approval.</p> <p>SunWater submitted the discharge works release curves for Tinana and Mary Barrage in accordance with section 202 (4).</p> <p>SunWater will record a daily estimate of the tailwater flow at Mary Barrage using a combination of the volume derived from the discharge release curve and an estimate of the volume discharged through the Mary Barrage fishway.</p> <p>SunWater will record a daily estimate of the tailwater flow at Tinana Barrage using a combination of the volume derived from the discharge release curve and an estimated volume discharged from the Tinana Barrage fishway.</p>	<p>N/A</p> <p>N/A</p> <p>Upon approval by the department</p> <p>1 July 2012</p> <p>1 July 2012</p>	<p>N/A</p> <p>N/A</p> <p>SunWater is currently operating under the Lower Mary River IROL in regards to monitoring of stream flow and storage water level data.</p> <p>SunWater is currently operating under the Lower Mary River IROL in regards to monitoring of stream flow and storage water level data.</p>
<b>Section 203 – Releases from storages</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 204 – Water diversions</b>	<p>SunWater currently record daily volumes of diversions from Mary Barrage into Owanyilla Diversion Channel, Teddington Weir and Copenhagen Bend Pipeline.</p> <p>SunWater's submission to the Department on 31 October</p>	Upon approval by the department.	SunWater is currently operating under the Lower Mary River IROL in regards to monitoring of stream flow and storage water level data

Section Description	Program to Meet ROP Requirements	Timing	Interim Methods
	2011 (Attachment 1) outlining the proposed methodology to estimate inflows into Tinana Barrage, also included a methodology to determine the daily volume water diverted from Mary Barrage into Mini Mini Creek. SunWater will begin recording this volume upon approval by the department.		
<b>Section 206 – Seasonal water assignment of water allocations</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 208 – Water quality</b>	SunWater will commence monitoring and recording of quality in the HW of Mary Barrage and Tinana Barrage in accordance with the Water Monitoring Data Collection Standards from 1 July 2012.	1 July 2012	SunWater is currently monitoring and recording as per the Lower Mary River IROL in regards to monitoring and recording of water quality.
<b>Section 209 – Bank condition</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 210 – Fish stranding</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 212 – Water taken by water users</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A
<b>Section 216 – Reporting requirements</b>	SunWater will comply with the ROP reporting requirements from 1 July 2012.	1 July 2012	SunWater will continue to report as per the Lower Mary River WSS IROL requirements until 30 June 2012.
<b>Section 217 – Quarterly reporting by the resource operations licence holder</b>	SunWater is working towards being compliant with the ROP. The first dataset under ROP rules will be supplied within three months of the ending of July -September 2012 quarter. Data provided with the following <u>exceptions</u> mentioned here: - Water quality data accuracy. SunWater equipment and analytical laboratory cannot meet the accuracy standards stated for pH and Total Sulphides. This has previously been discussed with and accepted by the department. (Refer s11 above). - Pending approval of proposed water level and stream flow methodologies.	As noted in 2 <sup>nd</sup> column	
<b>Section 218, 219 &amp; 220 – Annual reporting</b>	In general, SunWater will comply with annual reporting requirements under the ROP for the water year commencing from 1 July 2012.	1 July 2012	As per IROL requirements, an annual report fulfilling the IROL requirements for 2011 -2012 will be provided by 30 September 2012.

Section Description	Program to Meet ROP Requirements	Timing	Interim Methods
	<p>LOWER MARY RIVER WSS</p> <ul style="list-style-type: none"> <li>- As per the IROL requirements, an annual report fulfilling the IROL requirements for 2011 – 2012 water year will be provided by 30 September 2012.</li> <li>- SunWater will comply with annual reporting requirements under the ROP for the water year commencing from 1 July 2012.</li> </ul> <p>Data provided as per sections 218, 219 &amp; 220 with the following <u>exceptions</u> mentioned here:</p> <ul style="list-style-type: none"> <li>- Water quality data accuracy. SunWater equipment and analytical laboratory cannot meet the accuracy standards stated for pH and Total Sulphides. This has previously been discussed with and accepted by the department. (Refer s11 above).</li> <li>- Pending approval of proposed water level and stream flow methodologies.</li> </ul>	As noted in 2 <sup>nd</sup> column	
<b>Section 221 – Operational reporting</b>	SunWater will comply with the ROP operational reporting requirements with exception of the information contained within the approved Interim Program as approved by DERM.	N/A	N/A
<b>Section 222 – Emergency Reporting</b>	No Program required as SunWater is meeting ROP requirements.	N/A	N/A

**ATTACHMENT 1**

31 October 2011

Gary Burgess  
 Acting General Manager  
 Water Allocation and Planning  
 Department of Environment and Resource Management  
 GPO Box 2454  
**BRISBANE QLD 4001**

Dear Gary,

**MARY BASIN RESOURCE OPERATION PLAN – STREAM FLOW AND STORAGE WATER LEVEL METHODOLOGIES**

Section 202 of the Mary Basin Resource Operations Plan (ROP) requires SunWater to determine stream flow for inflow and tailwater sites within the Lower Mary River Water Supply Scheme (WSS). SunWater has assessed its ability to meet the requirements of the ROP in relation to stream flow and storage water level data in accordance with section 202 of the ROP below:

**Table 1 Lower Mary River Water Supply Scheme stream flow and water level data**

<b>Location</b>	<b>Water level and volume data</b>	<b>Daily flow data</b>
<b>Mary Barrage inflow</b>		138014A - Mary River at Home Park 90.8 km AMTD (DERM owned). Refer below for further details.
<b>Mary Barrage headwater</b>	138013 – Mary River at Mary Barrage HW 59.5 km AMTD (SunWater owned)	
<b>Mary Barrage tailwater</b>		Drawing no 138608 (Discharge curve). Refer to Attachment 1.
<b>Tinana Barrage inflow</b>		Tinana Barrage Inflow derivation technique. Refer below for further details and also Attachment 3.
<b>Tinana Barrage headwater</b>	138008 – Tinana Creek at Tinana Barrage HW 1.7 km AMTD (SunWater owned)	
<b>Tinana Barrage tailwater</b>		Drawing no 138609 (Discharge curve). Refer to Attachment 2.

March 2012



**Mary Barrage Inflow**

In relation to the daily flow data for Mary Barrage inflow, due to the close proximity of gauging station 138014A to the upstream limit of the Mary Barrage ponded area at 85 km AMTD, SunWater propose that the estimated inflows are equivalent to the flow passing gauging station 138014A. As the gauging station is owned and operated by DERM, SunWater do not intend to resupply this data to the department.

**Tinana Barrage Inflow derivation technique**

The Mary Basin ROP requires SunWater to submit an inflow derivation technique for the chief executive's approval (attached). The basis of the inflow derivation is described below:

**Water Diversions – Section 204 (1)**

SunWater must record daily volumes of water diverted from the Mary Barrage to Mini Mini Creek. Water diverted into Mini Mini Creek from the Owanyilla Channel will be accounted for as follows:

$$DVMM = (OPS - (OPS * OCL)) - MRPS - TWPL$$

*Where*

OPS = Daily volume diverted through Owanyilla pump station

MRPS = Daily volume diverted through Main Road pump station

TWPL = Daily volume diverted through Teddington Weir Pipeline

OCL = Owanyilla channel loss factor (assumed as 5%)

DVMM = Daily diversions into Mini Mini Creek

**Inflows into Tinana Barrage – Section 202**

Inflows into Tinana Barrage from Teddington Weir and Mini Mini Creek will be accounted for as follows:

$$INTB = (DVMM - (DVMM * MML)) + TWDC$$

*Where*

MML = Mini Mini Creek loss factor (assumed as 10%)

TWDC = Daily Teddington Weir discharge volume (derived from water level supplied by Wide Bay Water Corporation).

INTB = Daily inflows into Tinana Barrage

**Tinana Barrage and Mary Barrage fishway discharge curves**

In order to meet the requirements of the ROP, SunWater has determined that further investigation and assessment is required to determine the volume of water capable of being discharged by the Mary Barrage and Tinana Barrage fishways. SunWater will provide more detail in regard to this requirement in the Interim program.

Should you wish to discuss this matter further, please contact Gordon Delaney, SunWater's Manager Water Planning & Environment on (07) 3120 0143.

Yours sincerely

Tom Vanderbyl

**GENERAL MANAGER, SAFETY, STRATEGY & RISK**