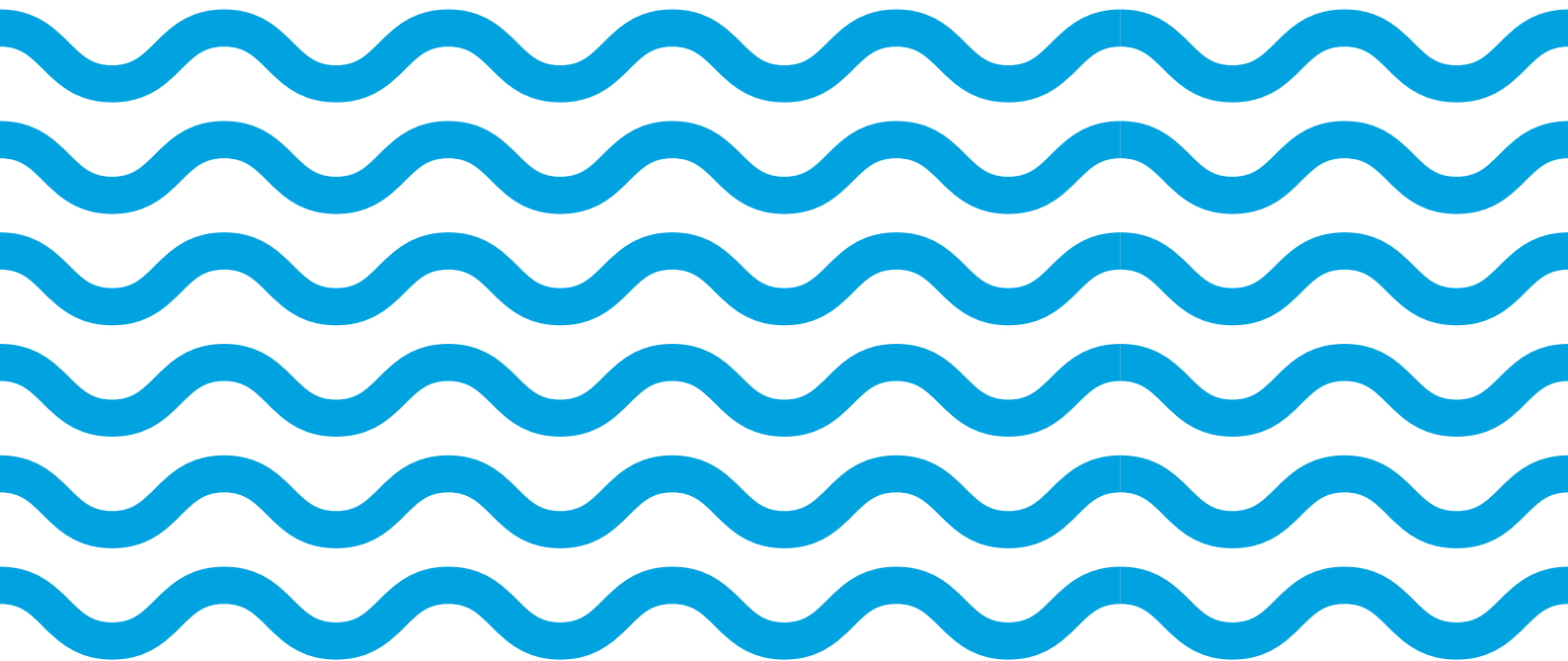







# Murrumbidgee To Googong

Annual Performance Report 2015



# Certificate of approval for issue of documents

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## Document revision control

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1	Chris Pulkkinen	5/9/2014	Annual report on M2G performance addressing Commonwealth Conditions of Approval.

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# 1. Background

In October 2007 the ACT Government, in response to recommendations from Icon Water (then ACTEW Corporation) announced a suite of new water infrastructure projects aimed at securing the Territory and region's water supply to meet future demands. One of those projects was the Murrumbidgee to Googong Water Transfer (M2G).

The M2G is a constructed pipeline that enables the pumping of water in times of need, from the Murrumbidgee River within the ACT and transferring it via a 12 km pipeline to Burra Creek (in NSW), where it then flows approximately 13 km to the Googong Reservoir. Construction of the pipeline started in January 2011, and the M2G became operational in September 2012. At the Federal level, the M2G was approved under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC 2009/5124). This report responds to the Commonwealth Condition of Approval No.6.

## 2. M2G Status

Since the M2G was handed over from construction in September 2012, regular maintenance runs (every 2-3 months) have been undertaken to ensure pumps and other equipment are maintained. There have been no operational runs (with the aim of transferring bulk water to Googong Reservoir) to date.

In the short-medium term, the scheme is unlikely to be required for bulk transfers, based on a number of factors including current overall water storage levels across the systems, and favourable climate/rainfall and demand conditions.

## 3. Aim of Report

The approval for the M2G from the Commonwealth Department of the Environment (DotE), formerly the Department of Sustainability, Environment, Water, Population and Communities (SEWPAC), is dated 29 October 2010, and contains 11 conditions of approval.

Conditions of Approval No. 6 (Publication Requirements) require Icon Water to provide DotE with an Annual Performance Report on the *implementation of the conditions of approval and any approved plans required under these conditions*. This Annual Performance Report details the performance of M2G from September 2014 – August 2015.

Performance is reported against:

- Commonwealth Conditions of Approval (EPBC 2009/5124)
- Table 4 '*Objectives and Targets*' of the M2G Operation Environmental Management Plan (July 2015).

## 4. Performance Report

Performance is reported against the Commonwealth Conditions of Approval as stated in approval *Murrumbidgee To Googong Water Transfer EPBC 2009/5124*.

The Commonwealth Conditions of Approval are summarised and tracked for compliance below.

CoA Ref#	Requirement	Compliance Status (condition met ongoing, not yet met)	Comments
1.	Submit an Extraction & Gauging Plan that meets CoA 1a-1d.	Condition met	<ul style="list-style-type: none"> <li>Original Plan approved 22 March 2012.</li> </ul>
1.	Implement Extraction & Gauging Plan	Ongoing	<ul style="list-style-type: none"> <li>The Extraction &amp; Gauging Plan was incorporated into an updated Streamflow &amp; Water Quality Management Plan, which was approved on 4 August 2014.</li> <li>The Streamflow &amp; Water Quality Management Plan was implemented throughout reporting period. A variation to this plan was approved by the Commonwealth on 28 July 2015.</li> </ul>
2.	Submit a Sustainable Diversion Limit Plan	Condition met	<ul style="list-style-type: none"> <li>Original Plan approved 15 April 2011.</li> </ul>
2.	Implement Sustainable Diversion Limit Plan	Ongoing	<ul style="list-style-type: none"> <li>The Sustainable Diversion Limit Plan was incorporated into an updated Streamflow &amp; Water Quality Management Plan approved on 4 August 2014.</li> <li>The Streamflow &amp; Water Quality Management Plan was implemented throughout the reporting period. A variation to this plan was approved by the Commonwealth on 28 July 2015.</li> </ul>
3.	Submit a Biodiversity Management & Offset Plan that meets CoA 1a-1l.	Condition met	<ul style="list-style-type: none"> <li>Original Plan approved 15 April 2011.</li> </ul>

CoA Ref#	Requirement	Compliance Status (condition met ongoing, not yet met)	Comments
3.	Implement Biodiversity Management & Offset Plan	Ongoing	<ul style="list-style-type: none"> <li>The M2G Biodiversity Offsets Management Plan was implemented throughout reporting period.</li> </ul>
4.	Submit a Burra Creek Environmental Management Plan that meets CoA 4a-4e.	Condition met	<ul style="list-style-type: none"> <li>Original Plan approved 22 March 2012.</li> </ul>
4.	Implement Burra Creek Environmental Management Plan	Ongoing	<ul style="list-style-type: none"> <li>The Burra Creek Environmental Management Plan was incorporated into the updated Aquatic Ecology Management Plan approved on 4 August 2014.</li> <li>The Aquatic Ecology Management Plan was implemented throughout reporting period. A variation to this plan was approved by the Commonwealth on 28 July 2015.</li> </ul>
5.	Prepare and implement a Decommissioning & Closure Plan at least one year prior to decommissioning	N/A	<ul style="list-style-type: none"> <li>Decommissioning is not anticipated in the medium to long term.</li> </ul>
6.	Provide Annual Performance Reports and publish on Icon Water website	Ongoing	<ul style="list-style-type: none"> <li>2013 Performance Report submitted and published on external website.</li> <li>2014 Performance Report submitted and published on external website.</li> </ul>
7.	Maintain accurate records of activities and make available on request	Ongoing	<ul style="list-style-type: none"> <li>Accurate records are kept and are available on request. No data requests were made during the reporting period.</li> </ul>
8.	Variations must be submitted to Minister for approval; and implemented if approved.	Ongoing	<ul style="list-style-type: none"> <li>A variation was sought during the reporting period (relating to updates to the Streamflow &amp; Water Quality Management Plan and the Aquatic Ecology Management Plan). The updates were approved by the Commonwealth on 28 July 2015.</li> </ul>

CoA Ref#	Requirement	Compliance Status (condition met ongoing, not yet met)	Comments
9.	Variations sought by the Minister	N/A	<ul style="list-style-type: none"> <li>• No variations were sought by the Minister during the reporting period.</li> </ul>
10.	Advise Department of commencement of construction and operation.	Condition met	<ul style="list-style-type: none"> <li>• Icon Water advised commencement of construction on 31/1/2011.</li> <li>• Icon Water advised commencement of operation on 27/9/12 in a letter dated 4/10/12. Note that although the infrastructure is operation ready, no operational runs (with the aim of transferring bulk water to Googong Reservoir) have taken place to date.</li> </ul>
11.	Upon direction of the Minister an independent audit of compliance with the CoA is conducted and reported to the Minister.	N/A	<ul style="list-style-type: none"> <li>• Icon Water did not receive a direction from the Minister.</li> </ul>

Performance is also reported against Table 4 'Objectives and Targets' of the M2G Operation Environmental Management Plan (July 2015), see below.

OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
<p><b>1. To employ practices which ensure that the operation and maintenance of the water transfer infrastructure:</b></p> <ul style="list-style-type: none"> <li>• <b>meet all environmental legislative requirements and compliance with all planning approvals</b></li> <li>• <b>are conducted in a manner that minimises adverse environmental impacts.</b></li> </ul>	<p>Icon Water implemented the full suite of management plans for the reporting period. The current approved plans are:</p> <ul style="list-style-type: none"> <li>• Operation Environmental Management Plan</li> <li>• Aquatic Ecology Management Plan</li> <li>• Streamflow &amp; Water Quality Management Plan</li> <li>• Landscape Rehabilitation &amp; Terrestrial Ecology Management Plan</li> <li>• Biodiversity Offsets Management Plan</li> </ul>	<p>Ensure the Operation Environmental Management Plan (OEMP) and relevant sub plans and Icon Water policies, processes and systems capture all environmental legislative requirements and compliance with all planning approvals.</p>	<p>Icon Water undertook a review of all M2G compliance obligations in June 2015. The review included a cross check of all compliance obligations and the OEMP and subplan management of these obligations. The review also addressed any observations relevant to the OEMP, identified through internal and external audits of the M2G operations and maintenance plans. The updated Compliance Register is located on Icon Water's Integrated Management System (IMS).</p>
		<p>Maintain up-to date and regularly reviewed versions of the OEMP and relevant sub plans and carry out all operation and maintenance activities according to these documents.</p>	<p>Icon Water undertook a review of the OEMP and sub-plans with new versions being approved in June/July 2015. These versions are available on the Icon Water Integrated Management System (IMS) and external internet site; and form the basis of all operations and maintenance activities.</p>

OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
		<p>Report all environmental incidents to the relevant authorities as outlined in the relevant approval documentation and legislation.</p>	<p>All M2G environmental incidents were reported to the relevant authorities (including the Commonwealth) and entered into Icon Water's Incident Management System. Incidents that occurred and were reported during the reporting period were:</p> <ol style="list-style-type: none"> <li>1. pH exceedance (22 April 2015)</li> <li>2. Step-down non-compliance (22 April 2015)</li> <li>3. Step-down non-compliance (17 August 2015)</li> </ol>
		<p>If environmental incidents do occur, review and modify the OEMP and relevant subplans as required in order to ensure that similar incidents do not occur in the future.</p>	<p>The three incidents that took place during the reporting period were responded to in the following manner:</p> <ol style="list-style-type: none"> <li>1. Update to procedures to include a review of Burra Creek pH levels in the week prior to start-up. In addition, CO<sub>2</sub> set-point for pH dosing was increased.</li> <li>2. 'High-High 150 Bar Alarm' PLC code change.</li> <li>3. Process documentation updated to minimise chance of future operator error.</li> </ol>



OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
<p><b>2. To employ practices which minimise impacts on aquatic ecology.</b></p>	<p>The Aquatic Ecology Management Plan (AEMP) and Streamflow &amp; Water Quality Management Plan (SF&amp;WQMP) were implemented as required.</p>	<p>Establish a credible aquatic ecology and water quality baseline data set before operation commences.</p>	<p>Pre-operation baseline data for the Murrumbidgee River and Burra Creek has been established (commenced 2008-09) through the Murrumbidgee Ecological Monitoring Program (MEMP).</p>
	<p>Aquatic ecology monitoring programs required under the AEMP have been implemented and reports published on the Icon Water external website.</p>	<p>Take all reasonable measures to prevent fish impingement on intake screens at the Murrumbidgee River.</p>	<p>The design of M2G results in very low water velocities into the intake structure when the project is operating. Icon Water is currently looking for a suitable opportunity (operation and spawning coincidence) to undertake a scientific assessment of the effectiveness of this design.</p>
		<p>No translocation of alien fish species from the Murrumbidgee River to Burra Creek.</p>	<p>The fish egg filters installed in M2G intake infrastructure are designed to exclude fish eggs from being transferred into Burra Creek. The filters have been maintained in accordance with the maintenance plan. In December 2013 Icon Water also undertook in-situ investigations into the transfer of fish eggs at M2G. The work, undertaken by University of Canberra, reported that neither fish nor fish eggs were detected at the Burra Creek outlet.</p>

OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
		<p>Establish credible site specific water quality trigger levels for Burra Creek in accordance with the principles of the ANZECC Guidelines.</p>	<p>Site specific water quality trigger levels for Burra Creek are outlined in the M2G Streamflow &amp; Water Quality Management Plan. The trigger levels are based on advice from GHD and the ANZECC Guidelines.</p>
		<p>Undertake additional ecological monitoring if the quality of water transferred is outside site specific ANZECC Guideline trigger levels.</p>	<p>On 22 April 2015 M2G did discharge water beyond the specified trigger levels (see Incident 1 above). Icon Water engaged with an aquatic ecology expert (GHD) to undertake additional onsite monitoring. No evidence of ecological harm was detected. This was reported to the all relevant regulators in the Final Incident Report.</p>
		<p>Take all reasonable measures to prevent exceedance of site specific impact thresholds for species in the Murrumbidgee River and Burra Creek.</p>	<p>All reasonable measures to prevent exceedance of site specific impact thresholds for species in the Murrumbidgee River and Burra Creek are being undertaken. Operating procedures have been updated specifically in relation to pH management to provide greater levels of control over discharge water quality at Burra Creek.</p>

OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
<p><b>3. To employ practices which minimise impacts on the geomorphology of Burra Creek.</b></p>	<p>The SF&amp;WQMP (which manages transfer flow volumes to protect geomorphological integrity) was implemented as required.</p> <p>Geomorphology monitoring undertaken through the requirements of the Aquatic Ecology Monitoring Plan has been published on the Icon Water external website.</p>	<p>Prior to operations commencing, establish monitoring programs for bank erosion.</p>	<p>A geomorphology monitoring program has been in place since 2009 as part of the baseline data collection (MEMP). The program was recently updated as part of the MEMP Review (incorporated into the approved Aquatic Ecology Management Plan July 2015).</p>
		<p>Respond within reasonable timeframes with appropriate mitigation measures if bank erosion is detected.</p>	<p>No bank erosion, linked to the operation of M2G has been detected.</p>
		<p>Prior to operations commencing, establish monitoring programs for erosion of pond forming bars.</p>	<p>A geomorphology monitoring program has been in place since 2009 as part of the baseline data collection (MEMP). The program was recently updated as part of the MEMP Review (incorporated into the approved Aquatic Ecology Management Plan July 2015).</p>
		<p>Respond within reasonable timeframes with appropriate mitigation measures if pond forming bars are eroded.</p>	<p>No pond forming bars, linked to the operation of M2G have been detected.</p>

OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
		<p>Prior to operations commencing, establish monitoring programs for London Bridge karst formation.</p>	<p>A geomorphology monitoring program has been in place since 2009 as part of the baseline data collection (MEMP). The program was recently updated as part of the MEMP Review (incorporated into the approved Aquatic Ecology Management Plan July 2015).</p>
		<p>Take all reasonable measures to prevent incidences of erosion that could cause structural weakening at London Bridge.</p>	<p>No erosion, linked to the operation of M2G, has been detected.</p>
<p><b>4. To employ practices which minimise impacts on terrestrial ecology.</b></p>	<p>The Landscape Rehabilitation &amp; Terrestrial Ecology Management Plan and Biodiversity Offsets Management Plan were implemented as required.</p> <p>Monitoring reports required under these plans have been published on the Icon Water external website.</p>	<p>Prior to operations commencing, establish a compensatory habitat offset package that meets the requirements of authorities in each of the three involved jurisdictions.</p>	<p>The M2G Biodiversity Offsets Implementation Program was approved by the ACT, NSW and Commonwealth regulators in 2010, and began implementation in 2011.</p>
		<p>Take all reasonable measures to prevent weed infestation after start up. If infestation occurs, they will be treated as agreed in the relevant Property Interaction Plan with the landholder.</p>	<p>Weed management is being undertaken in accordance with the M2G Landscape Rehabilitation and Terrestrial Ecology Management Plan.</p> <p>Property Management Plans are in place and remain the key document to control Icon Water's interaction with property owners.</p>

OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
		<p>Consistent compliance with the construction area rehabilitation plan requirements throughout the scheme's operation.</p>	<p>Landscape rehabilitation is being undertaken in accordance with the M2G Landscape Rehabilitation and Terrestrial Ecology Management Plan.</p> <p>Rehabilitation KPIs are assessed through twice yearly monitoring of easement plots.</p> <p>To date, seven landholder rehabilitation areas have reached the required targets. A number of other landholder areas were near to their rehabilitation targets (in the autumn 2015 assessment) and may meet their rehabilitation target (identified through the upcoming spring 2015 monitoring).</p>
<p><b>5. To employ practices which minimise impacts on heritage.</b></p>	<p>The SF&amp;WQMP (which manages transfer flow volumes to protect heritage values such as London Bridge) was implemented as required.</p> <p>No additional works were undertaken within the reporting period that had any interactions with heritage values.</p>	<p>Take all reasonable measures to prevent incidences of erosion that could cause structural weakening at London Bridge.</p> <p>Take all reasonable measures to prevent complaints about impact at recognised aboriginal heritage sites due to operation or maintenance</p>	<p>No erosion, linked to the operation of M2G, has been detected.</p> <p>Icon Water has not received any complaints regarding M2G operations and maintenance interacting with recognised aboriginal heritage sites.</p>

OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
<p><b>6. To employ practices which minimise noise and vibration impacts.</b></p>	<p>In 2013 Icon Water sent to the ACT and NSW regulators a <i>M2G Compliance Noise Assessment</i> (Feb 2013) and a <i>M2G Discharge Structure Noise Monitoring Report</i> (Mar 2013) assessing noise impacts associated with the operation of the discharge structure at the M2G project.</p> <p>Both regulators approved the noise report, which specifically outlined the operational noise levels and concluded that the noise levels comply with Icon Water's legislative and project requirements.</p> <p>Icon Water continues to manage noise and vibration arising from maintenance through control embedded within Work Instructions.</p>	<p>Take all reasonable measures to prevent noise and vibration complaints associated with operation and maintenance activities. If complaints are received they will be responded to following the Icon Water Complaints Handling Process outlined in Figure 5.1 of the M2G Community Information Plan.</p>	<p>Icon Water continues to manage the potential for noise and vibration impacts to occur during operations and maintenance.</p> <p>No complaints were received during the reporting period.</p>
		<p>Take all reasonable measures to prevent structural damage claims associated with vibration impacts as a result of operation and maintenance activities.</p>	<p>Icon Water continues to manage the potential for noise and vibration impacts to occur during operations and maintenance.</p> <p>No complaints were received during the reporting period.</p>
		<p>Maintain noise levels in compliance with Schedule 2 Part 2.2 of the Environmental Protection Regulation 2005 (ACT), or at levels endorsed by the ACT EPA.</p>	<p>Icon Water continues to operate M2G in the same way outlined in the M2G Discharge Structure Noise Monitoring Report which was approved by the ACT EPA (30 Apr 2013).</p> <p>Noise monitoring will be undertaken in 2016 to assess for any changes that may have taken place over time.</p>

OBJECTIVES	PERFORMANCE (Sep 2014-Aug 2015)	TARGETS	PERFORMANCE (Sep 2014-Aug 2015)
		<p>Maintain noise levels in NSW below 35 dB L<sub>Aeq</sub> (15 minute) in compliance with NSW Criteria limits as set out in the NSW Industrial Noise Policy (INP) (DECC 2000), or at levels endorsed by the NSW EPA. If necessary, utilise Source Control (best management practice and best available technology economically achievable) in conjunction with Transmission Control prior to Receiver Controls (refer INP Section 7) to ensure noise levels are not exceeded.</p>	<p>Icon Water continues to operate M2G in the same way outlined in the M2G Discharge Structure Noise Monitoring Report which was approved by the ACT EPA (3 Feb 2014).</p> <p>Noise monitoring will be undertaken in 2016 to assess for any changes that may have taken place over time.</p>
<p><b>7. To employ practices which minimise impact on air quality</b></p>	<p>Icon Water continues to manage for the prevention of dust emissions and odours arising from operation and maintenance. No complaints were received during the reporting period.</p>	<p>Take all reasonable measures to prevent visible dust emissions and offensive odours during operation and maintenance.</p>	<p>Icon Water continues to manage for the prevention of dust emissions and odours arising from operation and maintenance. No complaints were received during the reporting period.</p>
<p><b>8. To employ measures which minimise bushfire hazard and manage bushfire risk</b></p>	<p>The Biodiversity Offsets Plan was implemented as required. It includes a Bushfire Management Sub Plan that was also implemented as required.</p> <p>Icon Water requires all works to follow Work Instructions, which include bushfire hazard and ignition risk controls.</p>	<p>Take all reasonable measures to prevent bushfires attributable to water transfer operations and maintenance.</p>	<p>Icon Water continues to manage for the prevention of bushfires arising from operation and maintenance. Icon Water Work Instructions are the primary management control for this issue (e.g. no hot works in high bushfire danger periods).</p>



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