



Murrumbidgee to Googong Water Transfer Annual Performance Report 2016

**For the period September 2015 to
August 2016**

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3 Introduction

3.1 Purpose

This report addresses Commonwealth Condition of Approval No.6 of approval EPBC 2009/5124 for the Murrumbidgee to Googong Water Transfer (M2G) project under the *Environment Protection and Biodiversity Conservation Act 1999*.

3.2 Background

The Murrumbidgee to Googong Water Transfer (M2G) is a 12km pipeline that enables the pumping of water from the Murrumbidgee River, ACT to Burra Creek, NSW, where it then flows ~13 km to the Googong Reservoir.

Following regulatory approvals from the Commonwealth, ACT and NSW, construction of the pipeline commenced in January 2011, and the M2G became operational in September 2012.

3.3 M2G Status

Since construction completion 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.

4 Performance

Commonwealth Condition of Approval No. 6 (Publication Requirements) requires Icon Water to provide 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 2015 – August 2016.

Performance is reported against:

- Commonwealth Conditions of Approval (EPBC 2009/5124) in Section 4.1
- Table 4 'Objectives and Targets' of the M2G Operation Environmental Management Plan (OEMP) in Section 4.2.

4.1 Performance against Commonwealth Conditions of Approval

CoA Ref#	Requirement	Compliance Status	Comments
1.	Submit an Extraction & Gauging Plan that meets CoA 1a-1d.	Condition met	Original Plan approved 22 March 2012.
	Implement Extraction & Gauging Plan	Ongoing	The Extraction & Gauging Plan was incorporated into an updated Streamflow & Water Quality Management Plan, which was approved on 4 August 2014. A variation to this plan was approved by the Commonwealth on 28 July 2015. The Streamflow & Water Quality Management Plan was implemented throughout reporting period.
2.	Submit a Sustainable Diversion Limit Plan	Condition met	Original Plan approved 15 April 2011.
	Implement Sustainable Diversion Limit Plan	Ongoing	The Sustainable Diversion Limit Plan was incorporated into an updated Streamflow & Water Quality Management Plan approved on 4 August 2014. A variation to this plan was approved by the Commonwealth on 28 July 2015. The Streamflow & Water Quality Management Plan was implemented throughout the reporting period.
3.	Submit a Biodiversity Management & Offset Plan that meets CoA 1a-1l.	Condition met	Original Plan approved 15 April 2011.
	Implement Biodiversity Management & Offset Plan	Ongoing	The Biodiversity Management & Offset Plan was incorporated into an updated Offset Delivery Plan approved in April 2012. The M2G Offset Delivery Plan was implemented throughout reporting period. The M2G Offset Delivery Plan is expected to be revised during the next reporting period to reduce the vegetation survey monitoring and reporting frequency to biennially and include an additional requirement for biannual environmental condition assessment of the Offset Property to inform adaptive management.
4.	Submit a Burra Creek	Condition met	Original Plan approved 22 March 2012.

	Environmental Management Plan that meets CoA 4a-4e.		
	Implement Burra Creek Environmental Management Plan	Ongoing	The Burra Creek Environmental Management Plan was incorporated into the updated Aquatic Ecology Management Plan approved on 4 August 2014. A variation to this plan was approved by the Commonwealth on 28 July 2015. The Aquatic Ecology Management Plan was implemented throughout reporting period.
5.	Prepare and implement a Decommissioning & Closure Plan at least one year prior to decommissioning	N/A	Decommissioning is not anticipated in the medium to long term.
6.	Provide Annual Performance Reports and publish on Icon Water website	Ongoing	2013, 2014 and 2015 Annual Performance Reports submitted to the Commonwealth and published on external website. This report will be published on the external website following submission to the Commonwealth.
7.	Maintain accurate records of activities and make available on request	Ongoing	Accurate records are kept and are available on request. No data requests were made during the reporting period.
8.	Variations must be submitted to Minister for approval; and implemented if approved.	N/A	No variations were sought by Icon Water during the reporting period.
9.	Variations sought by the Minister	N/A	No variations were sought by the Minister during the reporting period.
10.	Advise Department of commencement of construction and operation.	Condition met	Icon Water advised the Commonwealth of commencement of construction on 31/01/2011. Icon Water advised the Commonwealth of commencement of operation on 27/09/12 in a letter dated 04/10/12. 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.
11.	Upon direction of the Minister an independent audit of compliance with the CoA is conducted and reported to the Minister.	N/A	Icon Water did not receive a direction from the Minister during the reporting period.

4.2 Performance against Objectives and Targets of the OEMP

Objectives	Performance (Sep 2015 - Aug 2016)	Targets	Performance (Sep 2015 - Aug 2016)
<p>1. To employ practices which ensure that the operation and maintenance of the water transfer infrastructure:</p> <ul style="list-style-type: none"> • meet all environmental legislative requirements and compliance with all planning approvals • are conducted in a manner that minimises adverse environmental impacts. 	<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"> • Operation Environmental Management Plan • Aquatic Ecology Management Plan • Streamflow & Water Quality Management Plan • Landscape Rehabilitation & Terrestrial Ecology Management Plan • Biodiversity Offsets Delivery Plan 	<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>The M2G Compliance Register, mapping conditions of approval and EIS/PER commitments to a plan/process and responsible person, is retained on Icon Water's Integrated Management System (IMS).</p> <p>Two internal audits relevant to the M2G OEMP were completed in 2015/16 including of the M2G Pipeline Management Plan in Quarter 1 of 2015/16 (Audit No. 16.03) and the M2G OEMP in Quarter 2 of 2015/16 (Audit No. 16.10). Recommendations for continuous improvement were entered into Icon Waters Guardian system as actions for completion.</p> <p>An external audit of the M2G OEMP was conducted by the Independent Environment Representative in August 2016. The audit identified two Corrective Action Requirements (CAR), three Observations of Concern (OoC) and two Opportunities for Improvement (OfI) which have been entered into Icon Waters Guardian system as actions for completion.</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>The current OEMP and sub-plans 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>
		<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 and entered into Icon Water's Incident Management System (Guardian). Incidents that occurred and were reported during the reporting period were:</p> <ol style="list-style-type: none"> 1. INC-9877 on 03/11/15 with a lighting strike bushfire reported by an onsite contractor and responded to by the ACT Rural Fire Service on the M2G Offset Property.

			<ol style="list-style-type: none"> 2. INC-9989 on 27/11/15 with a loss of communications at the M2G Low Lift Pump Station caused the M2G system to shut down while operating at 49ML/day. The flow requirement of operating at 20ML/day for 4 hours before shutdown was not achieved. 3. INC-10872 on 25/08/16 where it was discovered that the Swainsona recta translocation plot perimeter fence had not been reinstated following a prescribed burn.
		<p>If environmental incidents do occur, review and modify the OEMP and relevant sub-plans 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"> 1. No improvements required following incident investigation. The incident was handled promptly and fortunately the contractor was onsite to respond before the fire got out of control. The contractor followed the established incident procedure and contacted Icon Water as soon as noticing the fire to seek response instructions. 2. The communications fault causing the incident was identified and rectified by automation technicians. 3. Integrated Management System Form <i>FO03.01d M2G Offset Condition Assessment Checklist</i> was developed to ensure consideration of all relevant Offset Delivery Plan requirements, including Swainsona recta plot protection, during the biannual offset condition assessments.
2. To employ practices which minimise impacts on aquatic ecology.	<p>The Aquatic Ecology Management Plan (AEMP) and Streamflow & Water Quality Management Plan (SF&WQMP) were implemented as required.</p> <p>Aquatic ecology monitoring programs required under the AEMP have been implemented</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 MEMP.</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 expects to undertake a scientific assessment of the effectiveness of this design at full operating capacity in the next performance period.</p>

	through the Murrumbidgee Ecological Monitoring Program (MEMP) and reports published on the Icon Water external website.	No translocation of alien fish species from the Murrumbidgee River to Burra Creek.	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 undertook in-situ investigations into the transfer of fish eggs at M2G at ~50% operating capacity. The work, undertaken by University of Canberra, reported that neither fish nor fish eggs were detected at the Burra Creek outlet.
		Establish credible site specific water quality trigger levels for Burra Creek in accordance with the principles of the ANZECC Guidelines.	Site specific water quality trigger levels for Burra Creek are outlined in the M2G Streamflow & Water Quality Management Plan. The trigger levels are based on advice from the consultant monitoring ecologist (GHD) and the ANZECC Guidelines.
		Undertake additional ecological monitoring if the quality of water transferred is outside site specific ANZECC Guideline trigger levels.	All quality of water transferred in the reporting period was within the trigger levels in the M2G Streamflow & Water Quality Management Plan.
		Take all reasonable measures to prevent exceedance of site specific impact thresholds for species in the Murrumbidgee River and Burra Creek.	All reasonable measures to prevent exceedance of site specific impact thresholds for species in the Murrumbidgee River and Burra Creek are being undertaken.
3. To employ practices which minimise impacts on the geomorphology of Burra Creek.	The SF&WQMP (which manages transfer flow volumes to protect geomorphological integrity) was implemented as required. Geomorphology monitoring undertaken based on the requirements of the AEMP and delivered through the MEMP has been published on the Icon Water external website.	Prior to operations commencing, establish monitoring programs for bank erosion.	A geomorphology monitoring program has been in place since 2009 as part of the baseline data collection (MEMP).
		Respond within reasonable timeframes with appropriate mitigation measures if bank erosion is detected.	No bank erosion has been detected associated with M2G operations.
		Prior to operations commencing, establish monitoring programs for erosion of pond forming bars.	A geomorphology monitoring program has been in place since 2009 as part of the baseline data collection (MEMP).

		Respond within reasonable timeframes with appropriate mitigation measures if pond forming bars are eroded.	No pond forming bars has been detected associated with M2G operations.
		Prior to operations commencing, establish monitoring programs for London Bridge karst formation.	A geomorphology monitoring program has been in place since 2009 as part of the baseline data collection (MEMP).
		Take all reasonable measures to prevent incidences of erosion that could cause structural weakening at London Bridge.	No erosion has been detected in Burra Creek associated with M2G operations.
4. To employ practices which minimise impacts on terrestrial ecology.	The Landscape Rehabilitation & Terrestrial Ecology Management Plan and Offset Delivery Plan were implemented as required. Monitoring reports required under these plans have been published on the Icon Water external website.	Prior to operations commencing, establish a compensatory habitat offset package that meets the requirements of authorities in each of the three involved jurisdictions.	The M2G Biodiversity and Offset Management Plan was approved by the ACT, NSW and Commonwealth regulators in 2010 for implementation during construction. The M2G Offset Delivery Plan was approved in 2012 for delivery during operations.
		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.	Weed management is being undertaken in accordance with the M2G Landscape Rehabilitation and Terrestrial Ecology Management Plan. Property Management Plans are in place and remain the key document to control Icon Water's interaction with property owners.
		Consistent compliance with the construction area rehabilitation plan requirements throughout the scheme's operation.	Landscape rehabilitation is being undertaken in accordance with the M2G Landscape Rehabilitation and Terrestrial Ecology Management Plan. Rehabilitation KPIs have been assessed through twice yearly monitoring of easement plots during the first five years of rehabilitation. To date, nine landholder rehabilitation areas have reached the required targets and been handed back to the landowner for productive use. A number of other landholder areas were near to their rehabilitation targets (in the autumn 2016 assessment).

5. To employ practices which minimise impacts on heritage.	The SF&WQMP (which manages transfer flow volumes to protect heritage values such as London Bridge) was implemented as required. No additional works were undertaken within the reporting period that had any interactions with heritage values.	Take all reasonable measures to prevent incidences of erosion that could cause structural weakening at London Bridge which could affect heritage values.	No erosion has been detected associated with M2G operations.
		Take all reasonable measures to prevent complaints about impact at recognised aboriginal heritage sites due to operation or maintenance	Icon Water has not received any complaints regarding M2G operations and maintenance interacting with recognised aboriginal heritage sites.
6. To employ practices which minimise noise and vibration impacts.	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. 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. Icon Water continues to manage noise and vibration arising from maintenance through control embedded within Work Instructions.	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.	Icon Water continues to manage the potential for noise and vibration impacts to occur during operations and maintenance. No complaints were received during the reporting period.
		Take all reasonable measures to prevent structural damage claims associated with vibration impacts as a result of operation and maintenance activities.	Icon Water continues to manage the potential for noise and vibration impacts to occur during operations and maintenance. No complaints were received during the reporting period.
		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.	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).
		Maintain noise levels in NSW below 35 dB L _{Aeq} (15 minute) in compliance with NSW Criteria limits	Icon Water continues to operate M2G in the same way outlined in the M2G Discharge Structure Noise Monitoring Report which was approved by the NSW Department of Infrastructure (3 Feb 2014).

		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.	
7. To employ practices which minimise impact on air quality	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.	Take all reasonable measures to prevent visible dust emissions and offensive odours during operation and maintenance.	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.
8. To employ measures which minimise bushfire hazard and manage bushfire risk	The Offset Delivery Plan was implemented as required, including a Bushfire Management Sub Plan. Icon Water requires all works to follow Work Instructions, which include bushfire hazard and ignition risk controls.	Take all reasonable measures to prevent bushfires attributable to water transfer operations and maintenance.	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, fuel load and fire trail inspection during the biannual offset condition assessments).



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