



# Murrumbidgee to Googong Operational Environmental Management Plan

**EN03.01.10**

Version 5, 30 May 2017

## Document management

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### Document summary

<b>Title</b>	Murrumbidgee to Googong Operational Environmental Management Plan
<b>Version</b>	5
<b>Document status</b>	Final
<b>Date of issue</b>	30 May 2017

### Document development

	<b>Name</b>	<b>Position</b>	<b>Date</b>
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### Version control

<b>Version</b>	<b>Author</b>	<b>Date</b>	<b>Description</b>	<b>Approval</b>
1	Simon Webber	3 May 12	Version approved by regulator	3 May 12
2	May McDonald-Cox	28 Jan 14	Revision to reflect new ACTEW Water corporate governance arrangements and Feb 13 OEMP audit findings/recommendations	28 Jan 14
3	Chris Pulkkinen	29 April 15	Update to identify changes to AEMP and SF&WQP	29 April 15
4	Chris Pulkkinen	2 July 15	Update to Icon Water and Review	15 July 15
5	Sally Wright	19 Dec 16	Update in new Icon Water template, to reflect OEMP audit recommendations and to streamline plan	30 May 17

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## Acronyms

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<b>ACT</b>	Australian Capital Territory
<b>ACTPLA</b>	ACT Planning & Land Authority
<b>ANZECC</b>	Australian and New Zealand Conservation Council
<b>Cth</b>	Commonwealth
<b>DP&amp;E</b>	NSW Department of Planning & Environment
<b>DECC</b>	NSW Department of Environment, Climate Change (and Water) – now NSW Office of Environment & Heritage and NSW Office of Water
<b>DUAP</b>	Now refers to the NSW Department of Environment and Planning
<b>EIS</b>	Environmental Impact Statement
<b>EPA</b>	Environment Protection Authority
<b>EPBC Act</b>	Environment Protection and Biodiversity Act 1999 (Commonwealth)
<b>ER</b>	Environmental Representative
<b>ERG</b>	Environmental Reference Group
<b>ESDD</b>	Environment and Sustainable Development Directorate
<b>Ha</b>	Hectare
<b>HLPS</b>	High Lift Pump Station
<b>INP</b>	NSW Industrial Noise Policy
<b>IMS</b>	Integrated Management System
<b>Km</b>	Kilometre
<b>LLPS</b>	Low Lift Pump Station
<b>M2G</b>	Murrumbidgee to Googong Water Transfer
<b>ML</b>	Megalitres
<b>NSW</b>	New South Wales
<b>OEMP</b>	Operation Environmental Management Plan
<b>PER</b>	Public Environment Report
<b>PIP</b>	Property Interaction Plan

## Register of changes to previous version

Subject	Description of change/addition	Reference within OEMP
1. <b>General</b>	<ul style="list-style-type: none"> <li>The OEMP was transferred to the new Icon Water report template.</li> <li>Information was rearranged to provide a more logical flow to the Plan.</li> <li>Information was streamlined to reflect current and future requirements for the Plan.</li> <li>Links were made throughout the Plan to existing EMS documentation to address a recommendation in the M2G Independent Audit September 2016.</li> <li>The document was updated throughout to reflect Icon Water's current systems.</li> <li>NSW Departments were updated to reflect changes to department names.</li> </ul>	Throughout Plan
2. <b>OEMP sub-plans</b>	<ul style="list-style-type: none"> <li>A table listing OEMP sub plans was included in chapter 3.</li> <li>A brief description of each sub plan was included.</li> <li>Reference to the Environmental Works Program was made within the Landscape Rehabilitation and Terrestrial Ecology Management Plan to address <u>Opportunity for Improvement #002</u> in the M2G Independent Audit September 2016.</li> </ul>	Table 2 Chapter 3 Chapter 3
3. <b>Existing systems and functions</b>	<ul style="list-style-type: none"> <li>Icon Water's existing systems that support the OEMP were identified and compiled into one chapter.</li> <li>As risks change over time, the key risk summary was removed from the Appendix and reference was made to how risk associated with the M2G are recorded in Icon Water's corporate risk register.</li> </ul>	Chapter 4 Chapter 4.8
4. <b>Governance</b>	<ul style="list-style-type: none"> <li>Reference to the management structure in the Environmental Policy was made to address the <u>Opportunity for Improvement 001</u> in the M2G Independent Audit #001 September 2016.</li> <li>A chapter on community engagement has been included. This contains details on how Icon Water provides information to the community. This represents the intent of the Community Information Plan (CIP) and replaces the separate CIP previously provided in the Appendix of Version 4.</li> <li>Information on the property interaction plans has been included under landholder interactions.</li> </ul>	Chapter 6, Appendix B Chapter 6.3

5.	<b>Environmental Reference Group (ERG)</b>	<ul style="list-style-type: none"> <li>The new ERG Terms of Reference was included to reflect changes to the ERG structure following the ERG review in 2016.</li> </ul>	Chapter 6, Appendix E
6.	<b>Icon Water Environment Policy</b>	<ul style="list-style-type: none"> <li>Icon Water Environment Policy was updated to reflect the latest version publicly available.</li> </ul>	Appendix B

# 1 Introduction

## 1.1 Background of Murrumbidgee to Googong Pipeline

The Murrumbidgee to Googong (M2G) Water Transfer (the 'scheme') is a major infrastructure project designed to support security of water supply in the Australian Capital Territory (ACT) and region.

The scheme involves pumping water from the Murrumbidgee River at Angle Crossing in the ACT and transferring it via a 12 kilometre pipeline to Burra Creek (in NSW), where it flows a further 13 km to the Googong Reservoir. The scheme has the capacity to transfer up to 100 ML of water per day.

Construction of the M2G pipeline commenced in January 2011 and was completed in September 2012. Depending on the climate conditions, rainfall, river flows and water demand, the M2G can be in one of three modes:

- Suspension: parts of the system may be decommissioned requiring lead time before start up. No water can be transferred.
- Standby: ready to run, all components in place and being operated routinely for maintenance purposes.
- Operating: operating and transferring to increase Googong reservoir storage levels.

Extensive project and site information can be found in the [Environmental Impact Statement](#) (EIS) and [Public Environment Report](#) (PER) developed for the M2G scheme available on the Icon Water website.

## 1.2 Pipeline location

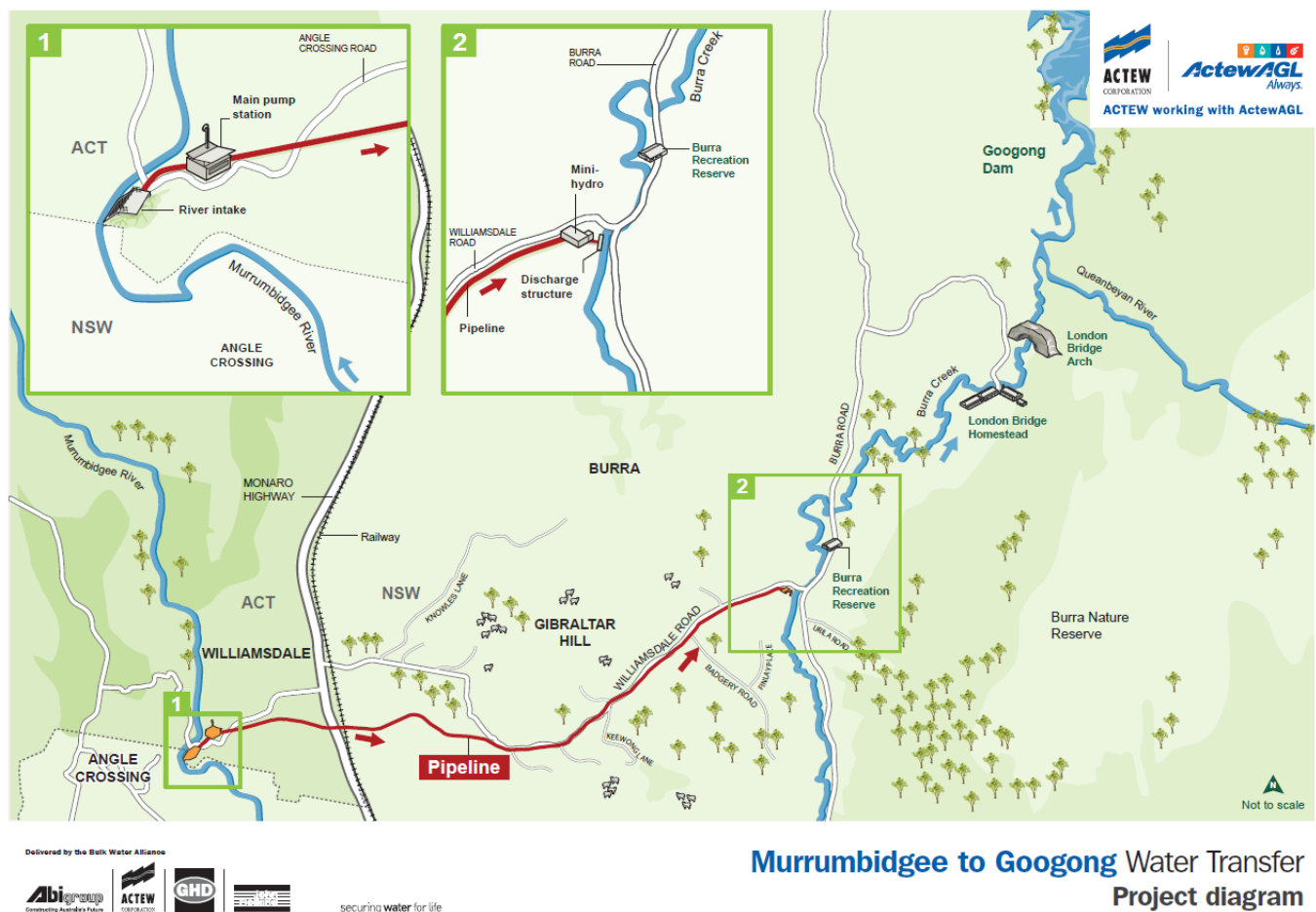
The pipeline crosses rural land in an east/northeast direction, generally located in the vicinity of Angle Crossing, Williamsdale and Burra Roads, within the districts of Williamsdale and Burra. The majority of the pipeline (approximately 9km) is located in NSW, with approximately 3km located in the ACT. The scheme has an expected design life of 80 years.

**Table 2: Key features**

Infrastructure	Description
<b>Intake/low lift pump station</b>	The intake / low lift pump station (LLPS) consists of a concrete box structure built into the riverbank including a screen, filtration to prevent fish egg transfer, and pumps and valves.
<b>High lift pump station</b>	The high lift pump station (HLPS) pumps water through the pipeline to a high point in the Gibraltar Range, from where it runs under gravity to the discharge point.
<b>Pipeline</b>	The pipeline is approximately 12 km long. Air valves and scour valves are located at regular intervals along the pipeline to provide pressure relief and to allow cleaning.
<b>Outlet structure</b>	The outlet structure is a weir box arrangement located on the bank of Burra Creek where water flows into the weir box from the pipeline and discharges down the creek bank and flows to Googong Reservoir.
<b>Ancillary infrastructure</b>	Infrastructure includes communications and power cabling, pressure gauges, fire hydrants, carbon dioxide dosing system and power supply facilities.
<b>Mini-hydro</b>	Electricity provided by the grid is supplemented by electricity generated by a mini-hydro-electric power facility, constructed as part of the scheme near the outlet structure. It has the capacity to recover approximately 20-30% of the electricity required for pumping activities.



**Figure 1: M2G scheme location**



Icon Water has developed the Operational Environmental Management Plan (OEMP) to outline the overarching environmental governance framework under which the M2G operates and provides a practical plan for environmental management of the scheme. The OEMP applies to the three M2G modes described above with specific requirements outlined in relevant sub-plans.

Icon Water will ensure that controls are properly implemented and are regularly monitored and audited to assess their effectiveness. Reviews will be undertaken as necessary to ensure the plan is up to date. The OEMP is consistent with and delivered via:

- Icon Water's commitment under the NSW Conditions of Approval, condition 6.4 (Appendix A) to develop an OEMP for the M2G.
- Icon Water's approach to ecologically sustainable development as outlined in its Environment Policy (Appendix B).
- Icon Water's Integrated Management System (IMS) certified to the Standards for quality (ISO 9001), environmental (ISO 14001) and safety (AS 4801) management systems which includes procedures, work instructions and activity-specific environmental work method statements.
- Icon Water's incident, action and risk management system.
- Landowner consent, interaction and easement guidelines through the customer and stakeholder management system.
- Icon Water's emergency management through the *Water Supply and Sewerage Emergency Plan* and *M2G Pipeline Emergency Response Plan*.
- Icon Water's operations and maintenance works through its works management system.
- Icon Water's compliance management system.

## 2 Statutory framework

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The M2G scheme is regulated by and operated in compliance with approvals granted by the Commonwealth, NSW and ACT governments and the Licence to take Water (WU67) under the *Water Resources Act 2007 (ACT)*. Approvals granted prior to the construction of the M2G include:

- NSW Department of Planning (now Department of Planning and Environment) scheme approval under Section 75J of the *Environmental Planning and Assessment Act 1979 (NSW)*, issued 31 March 2010 (Application 08\_0160).
- ACT Planning and Land Authority Development Application, May 2010 with approval under the *Planning and Development Act 2007 (ACT)*, issued August 2010 (Application 201017858).
- Commonwealth Department of Environment, Water, Heritage and Arts (now Department of Environment and Energy) approval under the *Environment Protection and Biodiversity Act 1999 (Cth)*, issued 29 October 2010 (EPBC 2009/5124).
- Icon Water Environmental Impact Statement, incorporating the Preferred Project Report (NSW) in December 2009.
- Pipelines Licence No. 37, issued under the *NSW Pipelines Act 1967 (NSW)*.

Icon Water's tracks compliance with these obligations through the compliance management system, audit program and management reviews.

Icon Water also complies with a comprehensive list of environmental legislation, standards, guidelines and approvals relating to environmental management for the operation of the scheme, outlined in Appendix C.

## 3 M2G sub plans

In compliance with Commonwealth, ACT and NSW development approvals and Environmental Impact Statement and Public Environment Report commitments, Icon Water has developed a series of issues specific sub plans for the management of the M2G scheme.

**Table 2: Revised OEMP sub plans**

Sub plan	Regulator	Revision date
Stream Flow and Water Quality Management Plan	NSW and Cth	30 May 2017
Aquatic Ecology Monitoring Plan	NSW and Cth	4 May 2017
Landscape Rehabilitation and Terrestrial Ecology Management Plan	ACT, NSW and Cth	14 March 2017
Offset Delivery Plan	Cth	9 May 2017

The approved sub plans are publicly available on Icon Water's web site ([www.iconwater.com.au](http://www.iconwater.com.au)).

Where applicable, these plans involve environmental monitoring, routine collection and interpretation of data to assess operational performance, environmental performance and compliance with requirements. The timing, frequency, methodology, location and responsibilities for environmental monitoring programs are specified in each relevant sub plan.

### 3.1 Stream Flow and Water Quality Management Plan

The purpose of the Stream Flow and Water Quality Management Plan is to describe in detail how Icon Water will manage, gauge, measure, monitor and report on stream flow and water quality for abstraction and discharge in the Murrumbidgee River and Burra Creek during M2G operation and maintenance.

The protection of environmental flows at Angle Crossing is a key governing factor around the operation of the M2G and is linked to the ecological objectives.

### 3.2 Aquatic Ecology Monitoring Plan

The purpose of the Aquatic Ecology Monitoring Plan is to describe the risks to the environment, the monitoring regime that will detect whether or not identified risks are arising and establish review procedures and management actions that should be initiated if triggers are exceeded.

The monitoring plans provide important information for decision making based on observed performance compared to environmental and operational standards or triggers. They are a key part of the adaptive management process.

### 3.3 Landscape Rehabilitation and Terrestrial Ecology Management Plan

The Landscape Rehabilitation and Terrestrial Ecology Management Plan is used to guide operational management of landscape rehabilitation and terrestrial ecology along the pipeline easement, and to address risks related to ongoing landscape rehabilitation and management of terrestrial ecology.

It specifically addresses the methods, techniques and timing for rehabilitating terrestrial flora and fauna during the operational phase. It incorporates the recommendations contained within the EIS for landscape rehabilitation activities and management of terrestrial ecology. It also guides development and delivery of the Environmental Works Program which includes environmental assessment of pre and post land management works.

### **3.4 Offset Delivery Plan**

Under the approval conditions, Icon Water has established over 100 Ha of compensatory habitat as an offset (offset site) to compensate for vegetation and habitat disturbance associated with construction of the M2G pipeline.

The M2G offset site comprises two non-contiguous land parcels in Williamsdale in the southern part of the ACT.

Monitoring of the offset site is to be undertaken through biennial vegetation condition surveys using eight permanent monitoring plots, to assess performance against the Offset Delivery Plan (ODP). Existing Ecological Indicators will be monitored for compliance once every two years to demonstrate ecological improvement over time.

The appropriate management of the offset land will continue in perpetuity.

Management sub-plans included in the ODP are as follows:

- Weed Management Sub Plan
- Rehabilitation Management Sub Plan
- Erosion Management Sub Plan
- Bushfire Management Action Plan
- Feral Animal Management Sub Plan
- Fencing Management Sub Plan
- Grazing Management Sub Plan.

## 4 Existing Systems and Functions

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For many operational environmental management aspects, existing business systems and functions are utilised rather than isolated sub plans which would otherwise duplicate existing processes and procedures. The most relevant of these are discussed below.

### 4.1 Environmental Impact Statement and Public Environment Report Commitments

The [Environmental Impact Statement](#) (EIS) and [Public Environment Report](#) (PER), developed for the M2G construction project, contain extensive environmental impact and risk mitigation measures, which are not reiterated in this OEMP. These can be viewed on Icon Water's public internet page.

### 4.2 Icon Water's Commitment to Sustainability

Icon Water is governed by the *Territory-Owned Corporations Act 1990 (ACT)*. A key objective of the Act is for Icon Water to operate in accordance with ecologically sustainable development; defined as the effective integration of environmental and economic considerations in decision-making processes. This requirement is supported by Icon Water's Environmental Policy (Appendix B).

### 4.3 Water Supply and Sewerage Emergency Plan

In the case of exposure to emergencies, the *Water Supply and Sewerage Emergency Plan* is enacted. The Plan is a single functional emergency and incident response document under the *Utilities – Emergency Planning Code* and *Utilities Act 2000 (ACT)* that combines procedures for managing all emergencies in Icon Water's water and sewerage networks. Any emergency arising from the operations and maintenance of the M2G pipeline will be dealt with under this plan and the *M2G Pipeline Emergency Response Plan*.

Key emergency contacts are listed in Appendix D.

### 4.4 Environmental Incident Response and Notification

Response and notification to environmental incidents and non-compliances with environmental licences or development approval conditions are required to be undertaken in accordance with the *WI03.00.03 Environmental Incident Response and Notification* under Icon Water's certified IMS. Incident response and notification ensures that:

- the environmental impact is minimised and cleaned up as soon as practicable
- all relevant parties, including regulators, are informed of the incident
- mitigation measures are explored
- corrective actions are implemented as appropriate to prevent recurrence.

Corrective actions are to be identified and documented in accordance with IMS *PR11.07 Corrective actions* procedure.

### 4.5 Annual Operations Plan

The Icon Water Annual Operations Plan incorporates seasonal outlooks, water supply catchment and source conditions and expected customer demand to outline a plan for operating the ACT potable water supply network, including the M2G scheme, for a future defined period.

## 4.6 Operations and Maintenance Manuals

Operation and maintenance manuals for the M2G infrastructure are developed in accordance with manufacturers' recommendations and operational objectives, including environmental requirements. Maintenance programs may also be adapted by considering performance based maintenance experience. Changes to the Asset Management Plan, Maintenance or Operations Program can be made based on the findings of asset management reviews.

## 4.7 Integrated Management System

Icon Water uses the Integrated Management System (IMS) to develop organisational strategy, translate it into operational actions, and to monitor and improve the effectiveness of both. The system is operated and continually improved in accordance with the *PO11 Integrated Management System*. Icon Water is currently certified to the following IMS components:

- Quality Management – AS/NZS ISO 9001:2008 *Quality management systems – Requirements*
- Environmental Management – AS/NZS ISO 14001:2004 *Environmental management systems – Requirements with guidance for use*
- Safety Management – AS/NZS 4801:2001 *Occupational health and safety management systems – Specifications with guidance for use.*

## 4.8 Risk management framework

Icon Water has assessed the potential operational and maintenance environmental aspects and impacts and developed controls for the M2G scheme in accordance with its IMS *PO7 Risk Management Framework*. These risks are recorded in Icon Water's risk register.

## 5 Performance objectives

### 5.1 Key environmental and operational performance objectives

Key environmental and operational performance objectives of the M2G scheme are to:

- Contribute to the water supply for Canberra and the nearby region.
- Ensure compliance with all relevant ACT, NSW and Commonwealth environmental legislation and approvals.
- Minimise/mitigate potential environmental impacts, and ensure that environmental quality is not compromised during operational and non-operational phases of the water transfer.

The following more specific objectives and associated key performance targets have been adopted in relation to the environmental aspects of the scheme operations.

**Table 1: Objectives and Targets**

No.	Objective	Target
1	To employ practices which ensure that the operation and maintenance of the water transfer infrastructure: <ul style="list-style-type: none"><li>• meet all environmental legislative requirements and compliance with all planning approvals</li><li>• are conducted in a manner that minimises adverse environmental impacts</li></ul>	<p>Ensure the OEMP relevant sub plans and Icon Water policies, processes and systems capture all environmental legislative requirements and compliance with all planning approvals.</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>Report all environmental incidents to the relevant authorities as outlined in the relevant approval documentation and legislation.</p> <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>
2	To employ practices which minimise impacts on aquatic ecology	<p>Establish a credible aquatic ecology and water quality baseline data set before operation commences.</p> <p>Take all reasonable measures to prevent fish impingement on intake screens at the Murrumbidgee River.</p> <p>No translocation of alien fish species from the Murrumbidgee River to Burra Creek.</p> <p>Establish credible site specific water quality trigger levels for Burra Creek in accordance with the principles of the Australian and New Zealand Conservation Council (ANZECC) Guidelines.</p> <p>Undertake additional ecological monitoring if the quality of water transferred is outside site specific ANZECC Guideline trigger levels.</p> <p>Take all reasonable measures to prevent exceedance of site specific impact thresholds for species in the Murrumbidgee River and Burra Creek.</p>
3	To employ practices which minimise impacts on the geomorphology of Burra Creek	<p>Prior to operations commencing, establish monitoring programs for bank erosion.</p> <p>Respond within reasonable timeframes with appropriate</p>

		<p>mitigation measures if bank erosion is detected.</p> <p>Prior to operations commencing, establish monitoring programs for erosion of pond forming bars.</p> <p>Respond within reasonable timeframes with appropriate mitigation measures if pond forming bars are eroded.</p> <p>Prior to operations commencing, establish monitoring programs for London Bridge karst formation.</p> <p>Take all reasonable measures to prevent incidences of erosion that could cause structural weakening at London Bridge.</p>
4	To employ practices which minimise impacts on terrestrial ecology	<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>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>Consistent compliance with the construction area rehabilitation plan requirements throughout the scheme's operation.</p>
5	To employ practices which minimise impacts on heritage	<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>
6	To employ practices which minimise noise and vibration impacts	<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 Icon Water's Complaints Handling Policy.</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>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>Maintain noise levels in NSW below 35 dBLAeq (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>
7	To employ practices which minimise impact on air quality	<p>Take all reasonable measures to prevent visible dust emissions and offensive odours during operation and maintenance.</p>
8	To employ measures which minimise bushfire hazard and manage bushfire risk	<p>Take all reasonable measures to prevent bushfires attributable to water transfer operations and maintenance.</p>



## 6 Governance

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### 6.1 Roles and Responsibilities

The management of the M2G OEMP is reflected in the management structure outlined in Icon Water's Environmental Policy (Appendix B).

### 6.2 Environmental Representative

The M2G Environmental Representative (ER) is independent of Icon Water and is suitably qualified and maintains certification with the Director General of NSW Department of Planning and Sustainability.

The key responsibilities of the ER are to carry out the duties as specified in Section 6.1 of the NSW Department of Planning and Sustainability's Planning Approval to:

- Oversee the implementation of the OEMP and monitoring plans and advise Icon Water on the achievement of the programs and plans
- Advise Icon Water on compliance with the approval and the EIS commitments
- Recommend to Icon Water steps to avoid or minimise environmental impact including any activities that should cease if there is a risk that a significant environmental impact will occur
- Review revisions to the OEMP and sub plans.

In addition, the ER will participate in the M2G Environment Reference Group.

### 6.3 Community engagement

#### 6.3.1 M2G Environment Reference group

Icon Water established an Environment Reference Group (ERG) to inform stakeholders and seek input to the effective delivery of environmental management, monitoring and reporting programs for the construction and operation of the M2G. This includes the review of outcomes from monitoring programs, the compensatory habitat offset package, and landscape rehabilitation.

The ERG enables reporting, review and consultation between community, professional, government and Icon Water representatives. The ERG also responds to specific requests from Icon Water to examine and advise on particular issues related to the scheme.

A review of the ERG was undertaken in 2015 and a revised Terms of Reference was developed in 2016 and is included at Appendix E.

#### 6.3.2 Community information

The Icon Water website provides information and links to environmental planning documents (such as the EIS/Preferred Project Report, Public Environment Report and Development Application), contact details, conditions of approval, approved management plans and other information such as licences and notifications. The website is reviewed regularly (but no less than every six months) to ensure it is up to date.

Prior to commencement of M2G operation and maintenance, notification is provided to affected landholders and ERG community representatives via correspondence in accordance with IMS work instruction *WI06.02.01 Customer letter mail out*.

Complaints from external stakeholders will be recorded and responded to in accordance with Icon Water's Complaints Handling Policy which describes how stakeholder complaints are responded to and resolved in a timely and responsive manner.

Media enquiries will be managed by Icon Water's Communications Manager. No comment will be provided to the media on any issue without prior approval from this manager.

### **6.3.3 Landholder interactions**

Individual operational Property Interaction Plans (PIP) are in place for all 17 landholders along the M2G easement.

The PIPs provide information on the processes to be followed by Icon Water for completing rehabilitation works on the landholder's property, and on how Icon Water will liaise with the landholder during operation of the M2G. The plans aim to provide all necessary information on what it means to have a pipeline easement on the landholder's property, including information on access arrangements for Icon Water to the pipeline, activities in the pipeline easement which require Icon Water approval and contact details for Icon Water.

## **6.4 Data analysis**

The stream flow and continuous water quality data collected shall be QA certified and stored on the HYDSTRA data management system and made available for reporting.

## **6.5 Reporting**

Icon Water submits a performance report annually to address the Commonwealth Condition of Approval No.6 of approval EPBC 2009/5124 for the M2G project under the *Environment Protection and Biodiversity Conservation Act 1999*. This Annual Performance Report summarises the performance against objectives and targets outlined in Section 5 of this OEMP.

Annually, under the IMS framework, a report on the progress and performance of environmental management, including operation of the M2G, is provided to the executive.

## **6.6 Auditing**

### **6.6.1 Independent audits**

Compliance with the requirements of the NSW Department of Planning and Environment (NSW DP&E) Planning Approval and the ACT Planning and Land Authority Notice of Decision will be assessed by the ER at two year intervals. The scope of the independent audits may include any development approval conditions and OEMP and sub plans.

The findings and recommendations of the audit will be presented to Icon Water. The audit reports are provided on Icon Water's public website and notified to the regulators.

### **6.6.2 Internal audits**

Internal audits will be conducted as required by Icon Water in accordance with IMS *PR11.02 Internal audit* procedure.

### **6.6.3 Corrective actions**

Corrective actions identified in the audits will be documented in accordance with IMS *PR11.07 Corrective actions* procedure and allocated to Icon Water personnel on the incident, action and risk management system in accordance with Icon Water's *P07 Risk management* framework.

## **6.7 Document control**

Icon Water will maintain records which relate to the environmental performance of water transfer in accordance to the IMS *PR11.09 Records management* procedure.

## 6.8 Training

Training will be provided to those workers involved in operation and maintenance of the water transfer scheme.

Two main forms of training include:

- Induction training (taken upon commencing work)
- M2G specific 'Toolbox' training

The induction training and toolbox training packages will include, but will not be limited to:

- the purpose and objectives of the M2G Scheme
- the OEMP and sub plans (purpose, objectives etc.)
- legal requirements including due diligence, duty of care and potential consequences of infringements
- environmental roles and responsibilities
- conditions of licences, permits and approvals
- controls in place to ensure environmentally sound operations and maintenance
- incident management and emergency response and control
- significant risks and concerns associated with operations and management.

## 7 OEMP review

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This document is the fourth review of the M2G OEMP. Reviews were conducted in January 2014, April 2015 and July 2015 meeting the requirement of the regulators.

From this point forward, Icon Water will review the OEMP at two yearly intervals and will, if necessary, review the OEMP and/or sub plans according to the following trigger points:

- a change in the scope of the scheme
- a significant environmental incident
- new knowledge of environmental risks
- completion of an audit and requirement for improvement
- decommissioning of the scheme.

The reviews will consider:

- Regulatory authority matters
- Matters raised by the Environment Reference Group, or Environment Representative
- Resourcing and costs of environmental controls
- Objectives and targets
- Monitoring and audit findings
- Environmental non-compliance, complaints and incident reports
- Details of corrective and preventative actions taken
- Organisational changes in Icon Water (i.e. changes in roles and responsibilities)
- The effect of changes in standards and legislation.

## Appendix A: OEMP Condition of Approval

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The OEMP specifically addresses condition 6.4 of the NSW Conditions of Approval:

*The Proponent shall prepare and implement an Operation Environmental Management Plan in accordance with the Guideline for the Preparation of Environmental Management Plans (DUAP, 2004) or its latest revision. The Plan shall include but not necessarily be limited to:*

*(a) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to the operation of the development, including all consents, licences, approvals and consultations;*

*(b) a management organisational chart identifying the roles and responsibilities for all relevant employees involved in the operation of the project;*

*(c) overall environmental policies to be applied to the operation of the project;*

*(d) standards and performance measures to be applied to the project, and means by which environmental performance can be periodically monitored, reviewed and improved, (where appropriate) and what actions would be taken in the case that non-compliance with the requirements of this approval are identified. In particular the following environmental performance issues shall be addressed:*

*(i) bushfire hazard and risk management; and*

*(ii) management and maintenance of offsets including the presentation to the Director-General of the final offset compensatory habitat package post-construction impact review;*

*(iii) management measures for easement areas, including management of vegetation, soil erosion, weed control and landholder liaison.*

*(e) the environmental monitoring requirements outlined under this approval;*

*(f) complaints handling procedures as identified in conditions 4.4 to 4.5; and*

*(g) the Management Plans listed under condition 6.5 of this approval;*

*(h) specific consideration of relevant measures to address any requirements identified in the documents referred to under conditions 1.1b) and 1.1c) of this approval; and*

*(i) management policies to ensure that environmental performance goals are met and to comply with the conditions of this approval.*

*The Plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of Operation of the project or within such period as otherwise agreed by the Director-General. Operation shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Proponent shall make the Plan publicly available as soon as practicable.*

## Appendix B: Environmental policy

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### POLICY P03

## Environmental management



Responsible Executive: General Manager Business Services

Date of issue: 14 October 2014 Version: 1.1 Next review date: 14 October 2017

### 1. Scope

- 1.1.1 All Icon Water workers must apply this policy to all work that they undertake. All Icon Water workers are responsible for understanding, implementing, maintaining and continuously improving the Environmental Management System in areas under their control.

### 2. Purpose

- 2.1.1 This policy provides high level direction and documents Icon Water's commitment to:
- provide safe water and wastewater services to its customers and the community
  - ensure environmental management and sustainability when designing, operating and maintaining Icon Water's assets
  - prevent pollution.

### 3. Policy

- 3.1.1 Icon Water is committed to operating and continually improving an effective Environmental Management System (EMS) that conforms to ISO 14001:2004 *Environment Management – Requirements with guidance for use* and support compliance with ACT, NSW and Commonwealth legal obligations including the *Environment Protection Act 1997 (ACT)*, *Water Resources Act 2007 (ACT)* and the *Territory-owned Corporations Act 1990 (ACT)*. The EMS will operate as a component of a broader Integrated Management System (IMS) and includes activities to support operations in accordance with the principles of Ecologically Sustainable Development
- 3.1.2 The General Manager Business Services is the executive responsible for the EMS and leads its operation and continual improvement. The executive responsible must establish and document EMS objectives (relating to the operation and continuous improvement of the EMS), along with performance measures and targets. The executive responsible also makes decisions in regard to:
- appointing the EMS Management Representative (MR)
  - the focus of improvement effort
  - authorising the EMS objectives, performance measures and targets.
- 3.1.3 All Executives play a key role in applying the EMS in areas under their control. They make decisions to determine the adequacy and effectiveness of environmental management and identify areas for improvement.
- 3.1.4 The EMS MR must:
- ensure the EMS requirements are established, implemented and maintained (in accordance with ISO14001)
  - report on the performance of the EMS to the IMS MR for review and as a basis for improvement of the EMS
  - promote an awareness of environmental requirements throughout the organisation

## 4. Definitions

Icon Water uses the terminology contained in ISO 14001:2004.

Term	Definition
Environment	The term environment refers to an organisation's natural and human surroundings. An organisation's environment extends from within the organisation itself to the global system, and includes air, water, land, flora, fauna, as well as human beings.
Executives	Individuals with the title 'General Manager' who report directly to the Managing Director.
Ecologically sustainable development	Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends. This includes the effective integration of environmental and economic considerations in decision-making processes (As defined in the Territory-owned Corporations Act 1990).
Management Representative (MR)	The organisation's top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for the EMS (As defined in ISO14001:2004).
Sustainable outcomes	Outcomes achieved from a focus on sustainability, being: balancing financial health, environmental sustainability, cultural vitality and social responsibility to meet the needs of the present without compromising the ability for future generations to meet their own needs.
Worker	A person/s who carries out work in any capacity including an employee, contractor, employees of sub-contractors, labour hire workers, apprentices, students or volunteers (As defined in the ACT Work Health and Safety Act 2011).

## 5. References

5.1.1 *Environment Protection Act 1997 (ACT)*

5.1.2 *Water Resources Act 2007 (ACT)*

5.1.3 *ISO 14001:2004 Environment Management – Requirements with guidance for use*

## 6. Document control

Version	Short Description of Amendment
1.0	New policy for Icon Water IMS.
1.1	Administrative amendment – combined 3.1.1 and 3.1.2 policy requirements and included the definitions for sustainability and ecologically sustainable development.

## Appendix C: Statutory framework

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### C.1 Relevant Legislation

Key environmental legislation relating to environmental management of the operation of the M2G includes:

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#### Commonwealth legislation

*ACT (Planning and Land Management) Act 1998*

*Canberra Water Supply (Googong Dam) Act 1974*

*Environmental Protection and Biodiversity Conservation Act 1999*

*Water Act 2007*

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#### ACT legislation

*Environment Protection Act 1997*

*Nature Conservation Act 2014*

*Building Act 2004*

*Fisheries Act 2000*

*Pest Plants and Animals Act 2005*

*Heritage Act 2004*

*Native Title Act 1994*

*Water and Sewerage Act 2008*

*Water Resources Act 2007*

*Utilities Act 2000*

*Territory-owned Corporations Act 1990*

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#### NSW legislation

*Environment Planning and Assessment Act 1979*

*Googong Dam Catchment Area Act 1975*

*Fisheries Management Act 1994 and Fisheries Management Amendment Act 1997*

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*Local Government Act 1993*

*National Parks and Wildlife Act 1974*

*Native Vegetation Act 2003*

*Noxious Weeds Act 1993*

*NSW Catchment Management Authorities Act 2003*

*Pipelines Act 1967 and Pipelines Regulation 2013*

*Protection of the Environment Operations Act 1997*

*Rural Fires Act 1997*

*Rural Lands Protection Act 1998*

*Threatened Species Conservation Act 1995*

*Water Management Act 2000*

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## **C.2 Guidelines and Standards**

The key reference material relevant to environmental management during the operation of the Murrumbidgee to Googong water transfer includes:

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### **ACT Guidelines and standards**

ACT Code of Forest Practice ( 2005)

Air Environment Protection Policy (1999)

General Environmental Protection Policy (2007)

Guidelines for Preparation of an Environmental Management Plan (2009)

Noise Environmental Protection Policy (2008)

Water Quality Environmental Protection Policy (2008)

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### **NSW Guidelines and standards**

Assessing Vibration: A Technical Guideline (DECC 2006)

Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)

Australian Standard 2885.3-2012 Pipelines

Florabank Native Seed Collection Code of Practice (1999)

NSW Industrial Noise Policy (DECC 2000)

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Policy and Guidelines for Bridges, Roads, Causeways, Culverts and Similar Structures (1999)

Victoria Revegetation Techniques (2003)

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### **C.3 Approvals, Licences and Permits**

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#### **Approval/Licence/Permit**

Licence to Take Water from Cotter, Queanbeyan and Murrumbidgee Rivers (WU67) under the *Water Resources Act 2007* (ACT)

NSW Conditions of Approval (NSW)

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## Appendix D: Icon Water emergency contacts

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**Table D.1: Icon Water emergency contacts**

Contact	Phone	Email
Water Distribution	0414 511 719	<a href="mailto:waterWDE@iconwater.com.au">waterWDE@iconwater.com.au</a>
Environment and Sustainability	6180 6229	<a href="mailto:Environment.Sustainability@iconwater.com.au">Environment.Sustainability@iconwater.com.au</a>
Icon Water Customers, Faults and Emergencies	6248 3111	<a href="mailto:talktous@iconwater.com.au">talktous@iconwater.com.au</a>

**Table D.2: ACT Authority emergency contacts**

Contact	Phone	Email
ESDD - EPA	13 22 81	<a href="mailto:Environment.protection@act.gov.au">Environment.protection@act.gov.au</a>
ACT Health	6205 1700	<a href="mailto:HealthACT@act.gov.au">HealthACT@act.gov.au</a>
ACT Emergency Services	000 (all phones and mobiles) 112 (GSM phones) 106 (text)	

The Icon Water [Environmental Incident Response and Notification Work Instruction](#) outlines what to do and who to contact in response to an environmental incident.

## Appendix E: ERG Terms of Reference

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# Murrumbidgee to Googong water transfer Environment Reference Group - Terms of reference



**Responsible Executive:** General Manager Business Services  
**Date of issue:** 8 July 2016      **Version:** 2      **Next review date:** 8 July 2018

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### Purpose

The Murrumbidgee to Googong (M2G) Water Transfer (the Transfer) Environment Reference Group (ERG) was established to provide advice and recommendations to Icon Water for the effective delivery of environmental management, monitoring and reporting for the operation of the M2G Water Transfer. The ERG is intended to provide the structure for reporting, review and consultation between community, government and Icon Water representatives.

This terms of reference supersedes the *Murrumbidgee to Googong Water Transfer Environment Reference Group Guidelines Version 3, 28 November 2013*.

### Functions

The ERG will continue to:

- Assist and advise Icon Water and its consultants on the community and technical aspects and overall operation of its flow, water transfer, monitoring, rehabilitation and environmental management strategies.
- Review and advise on the implementation and outcomes of monitoring programs and environmental mitigation actions, including rehabilitation, compensatory habitat offsets, geomorphologic, water quality, ecological monitoring and additional monitoring programs due to exceeded water quality triggers or community involvement.
- Assist Icon Water with the interpretation of monitoring results and environmental impacts to inform mitigation strategies and support a quality reporting regime.
- Be informed on the outcome of audits, management reviews, compliance tracking programs and incident investigations.
- Advise Icon Water on further options for environmental mitigation where programs indicate a need.
- Respond to specific requests from Icon Water to examine a particular issue related to the Transfer (e.g. in response to related technical expertise, anecdotal and/or community monitoring information) and provide advice and/or further recommendations on this.

### Membership

The ERG will consist of representatives from community and professional groups/agencies across the Commonwealth, NSW and ACT jurisdictions, selected for their expertise, interest in the transfer over time and demonstrated commitment of the protection of the environment.

The ERG membership includes technical, community and agency

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representatives that may be comprised as follows:

- Independent Environment representative (Chair)
- Icon Water Environment and Sustainability representative (Secretariat)
- Icon Water Manager Environment and Sustainability
- Icon Water Operator representative
- NSW Government representative/s such as:
  - NSW Office of Water
  - NSW Environment Protection Authority
  - NSW Office of Environment and Heritage
- ACT Government representative/s such as:
  - ACT Environment Protection Authority
  - ACT Parks and Conservation
  - ACT Conservation, Planning and Research
- Nature Conservation Council of NSW
- Queanbeyan-Palerang Regional Council
- Community Group representative/s such as:
  - South East Local Land Services
  - Upper Murrumbidgee Catchment Coordinating Committee
  - Burra Community Association
  - Burra Landcare
  - Molonglo Catchment Group
  - Smiths Road Community
  - Friends of Grasslands
- Technical consultants such as:
  - The consultant undertaking delivery of the Murrumbidgee Ecological Monitoring Program (currently GHD)
  - The consultant undertaking monitoring of the pipeline rehabilitation and biodiversity offset management (currently EcoLogical Australia)

The ERG membership will be reviewed to ensure its representation is in line with the requirements of the transfer's operational phases.

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## **Consultation**

Outside of operational phases, ERG functions will be performed through web based information sharing, email correspondence, face to face meetings and phone requests between Icon Water and ERG members. ERG members will be informed when reports pertaining to M2G operations become available on the internet and their advice will be sought on the implementation and outcomes of monitoring programs and environmental mitigation actions. Icon Water will advise ERG members of planned pipeline operations and changes to the planned schedule and consult with ERG members on other matters pertaining to the environmental management of the M2G. Icon Water will host annual community events or leverage off other existing community events to ensure information is shared to ERG members and other local audiences.

During operational phases, Icon Water will convene ERG meetings with

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members as soon as possible after the decision to operate has been made and continue on an annual basis. Icon Water will arrange face to face meetings to monitor the impacts of the operation as required and upon request by ERG members.

Icon Water staff can be contacted via the Talk to Us customer portals or via direct contact with staff responsible for the operational management of the M2G pipeline and respective lands via the Secretariat in the first instance.

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### **Conflicts**

Grievances and disputes are to be resolved at the lowest appropriate level and managed according to the principles of natural justice and procedural fairness. In the first instance, the matter is to be raised between the parties directly and if possible resolved in a timely manner at that level. If the matter cannot be resolved between the parties directly then the matter should be referred to the Chair to help reach a resolution.

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### **Review**

The ERG functions and performance, and terms of reference will be reviewed after twenty four months. Amendments can be proposed by the ERG Chair and reviewed by Icon Water staff.

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### **Definition**

Term	Definition
Operational phase	Operating the pipeline with continuous transfer of water to Googong reservoir for a period of greater than 30 consecutive days and not a routine maintenance run.