



Common Environment Management Plan

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1 Document management

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3 Background

3.1 Purpose of the Common Environment Management Plan

Icon Water has developed this Common Environment Management Plan (EMP) to outline overarching corporate governance arrangements and environmental aspects and impacts common to all EMPs to prevent repetition, provide a single reference point and optimise efficiency.

This EMP is consistent with the ACT Environment Protection Authority's (EPA) [Environmental Guidelines for Preparation of an Environment Management Plan \(2013\)](#). The purpose of the EMP is to protect the environment due to the operation of Icon Water's utility activities providing water and wastewater services for the Canberra region, and is based on the objectives in Part 1 of the *Environment Protection Act 1997* (ACT).

This EMP forms part of Icon Water's Integrated Management System (IMS), which incorporates arrangements consistent with *ISO 14001:2004 Environmental Management System* (EMS).

3.2 Statutory framework

Icon Water complies with relevant environmental legislation, standards and guidelines, across Commonwealth, ACT and NSW jurisdictions, relevant to the environmental management of activities.

We utilise CMO Compliance (CMO) to identify specific legal obligations under which we operate, such as environment and planning regulatory obligations, permits, licences, approvals, crown leases and contracts. Our *EMS Legal Register – Environment and Sustainability Branch* is also utilised to support compliance with broader environment and planning regulations, codes of practice and emerging issues. Both CMO and the EMS Legal Register are updated when new legislation is released based on SAI Global Lawlex legal updates, license amendments and review of the external strategic context.

3.3 Commitment to sustainability

Under Section 7 of the [Territory-owned Corporations Act 1990 \(ACT\)](#) (ToC Act), the objectives of Icon Water are to:

- a) operate at least as efficiently as any comparable business;
- b) maximise the sustainable return to the Territory;
- c) show a sense of social responsibility; and
- d) operate in accordance with the objective of ecologically sustainable development.

Under the obligation, ecologically sustainable development means the effective integration of environmental and economic considerations in decision-making processes achievable through implementation of the following principles:

- a) the precautionary principle;
- b) the inter-generational equity principle;
- c) conservation of biological diversity and ecological integrity; and
- d) improved valuation and pricing of environmental resources.

This obligation is demonstrated through our [PO3 Sustainability and Environment Policy](#) commitment published on our website.

3.4 EMP structure

The structure and content of the EMP, where relevant and possible, complies with ACT EPA's [Environmental Guidelines for Preparation of an Environment Management Plan \(2013\)](#) and captures the specified information requirements in the following sections:

- General risk assessment to identify environmental issues and the potential impacts on the environment – Section 5; and
- Common corporate governance arrangements to ensure the environment is appropriately protected and environmental issues are appropriately mitigated – Section 4.

3.5 Scope

This EMP sets out the overarching arrangements for management of the environment as a result of Icon Water's general operational water and wastewater activities (figures 1 and 2) effectively protecting human health and the environment every day.

Certain activities or sites may be subject to detailed operational EMPs with specific environmental risks and controls (as set out in the Operational EMP Register EN03.00.04).

Further information on business strategic direction and activities are set out in our [Business Strategy](#) (Statement of Corporate Intent) publicly available on our website. Our performance, including resource consumption, environmental compliance and sustainable development, is available in each [Annual Report](#) published on our website.

Construction activities are out of scope of this Common EMP as distinct and separate projects.



Figure 1. What we do at Icon Water

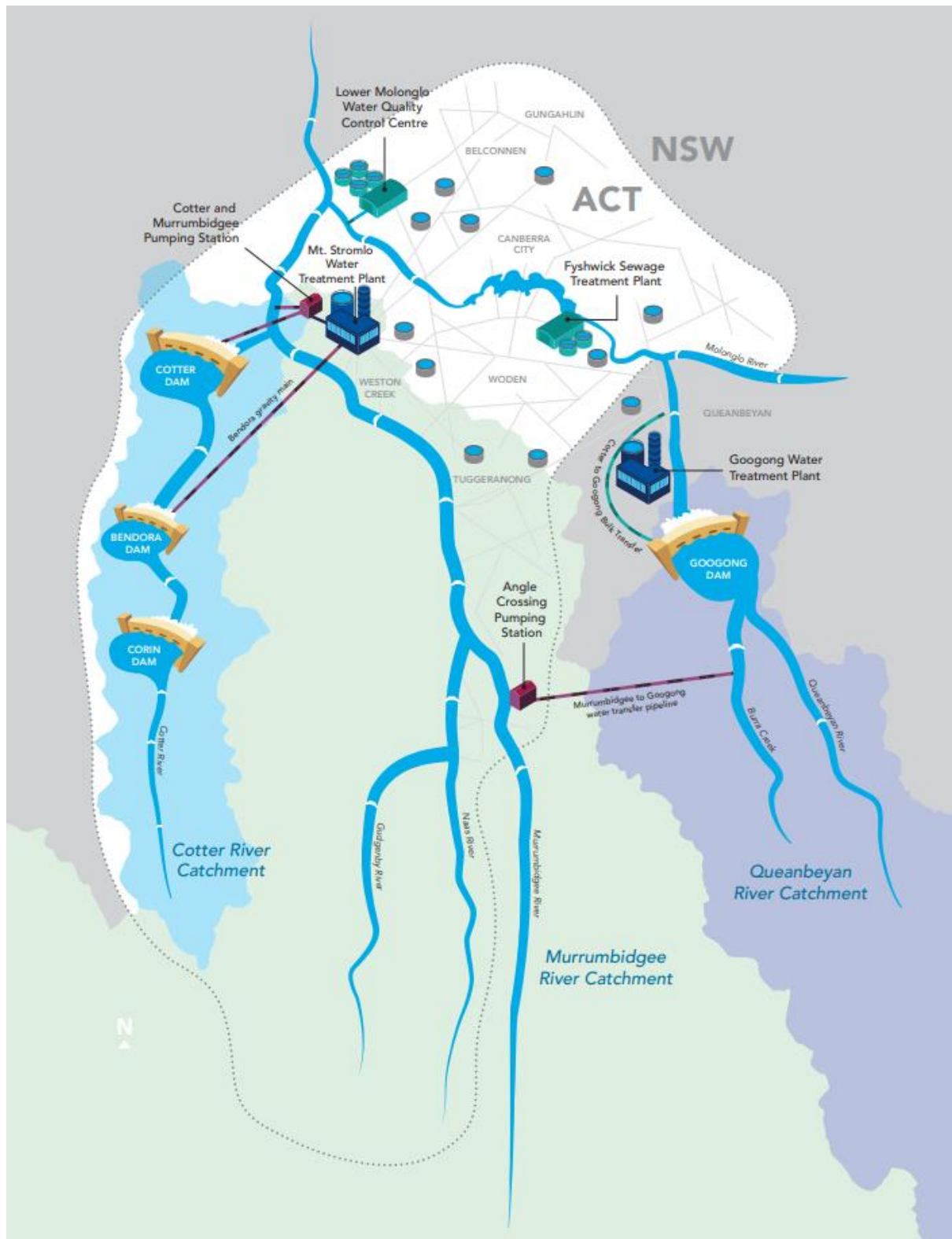


Figure 2. Water and wastewater network

4 Corporate governance arrangements

4.1 Integrated Management System

Icon Water operates under an IMS (Figure 3) to meet environmental, quality, regulatory and workplace health and safety requirements conforming with the following International Standards:

- AS/NZS ISO 14001 - Environmental Management System (EMS)
- AS/NZS ISO 9002 - Quality Management Systems / ISO 55001 - Asset Management Systems
- AS/NZS ISO 4801 - Safety Management Systems

Icon Water uses the 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 to comply with PAS 99:2012 Specification of common management system requirements as a framework for integration (PAS 99).

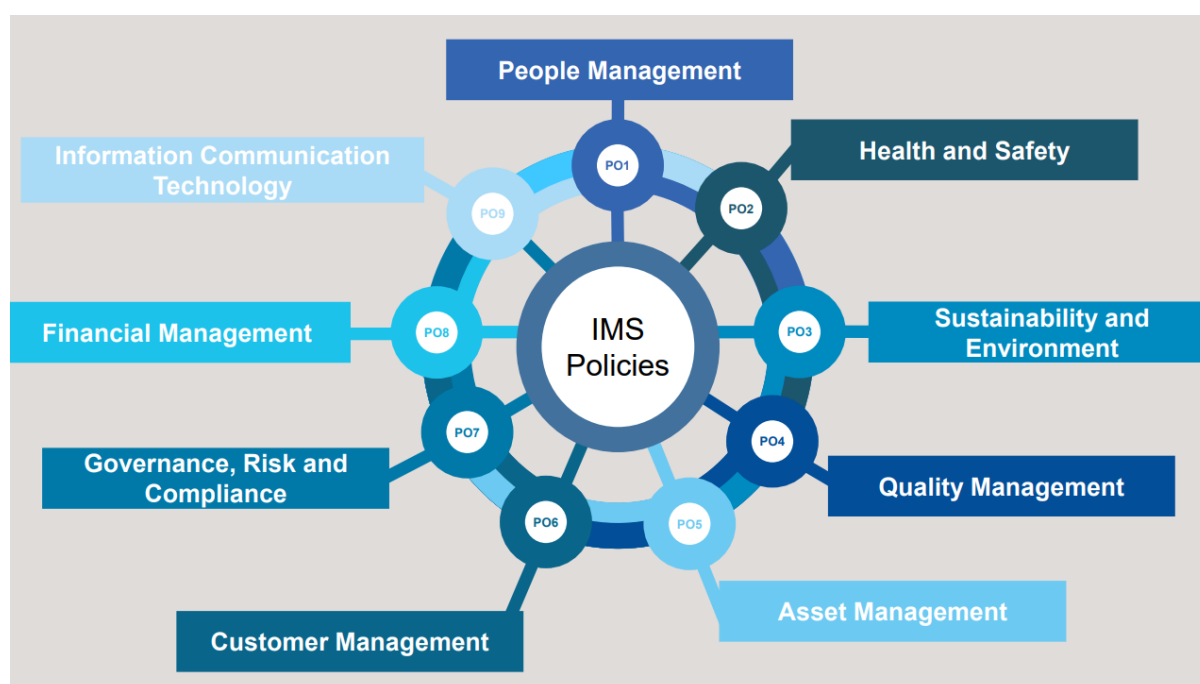


Figure 3. IMS framework

4.1.1 Environmental management system

The [PR03.01 Environmental Management](#) procedure, under the PO3 Sustainability and Environment Policy, outlines the approach to identify, assess, authorise, control, monitor and review the potential environmental interaction/s of business activities to:

- meet legal obligations;
- determine the general environmental duty to prevent or minimise environmental harm and nuisance; and
- implement ecologically sustainable development.

Various activity-specific work instructions, forms and enablers are in place in the IMS to deliver our sustainability and environment commitment as outlined in the [EN03.01.05 EMS Manual](#) (Figure 4).

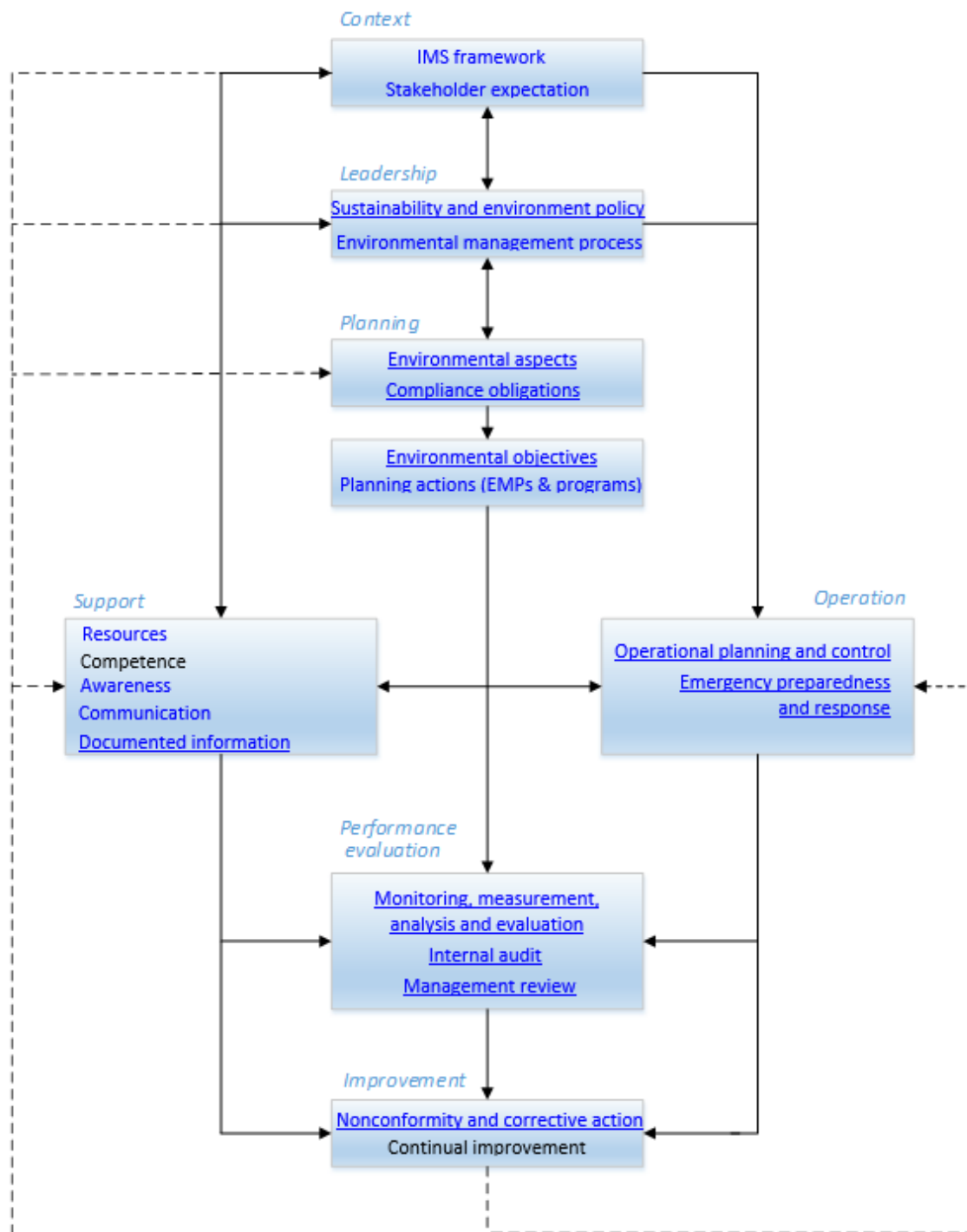


Figure 4. Icon Water EMS Elements

4.2 Operations, maintenance and network strategic planning

Operation and maintenance of our water and wastewater network is guided by Icon Water's IMS in conjunction with supporting systems.

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 network for a future defined period.

The operation, monitoring and control of infrastructure is managed through the Supervisory Control and Data Acquisition (SCADA) System, combined with regular physical inspections and tests by

operators. It is possible to remotely monitor and control operation through the SCADA system. Records of operational activities are retained electronically through operations logs and check sheets.

Maintenance of infrastructure is managed and documented using the Axle System. Maintenance of assets is scheduled based on manufacturer's specifications, operational objectives, criticality assessments and is adapted using performance based maintenance knowledge.

Strategic planning for the network is performed with key internal stakeholders based on performance, projections and models. Infrastructure upgrades, renewals and augmentations are identified, scheduled and managed using Icon Water's capital works process. This is supported by our Asset Management Plan, which is a strategic document predicting future asset investments required for the next 20 years.

4.3 People

4.3.1 Capabilities and responsibilities

Personnel and contractors are engaged based on qualifications, experience, skills and attributes required for the activity to ensure compliance with regulatory obligations.

Personnel position descriptions outline common and specific responsibilities, including environmental management and compliance.

Specific resources in the Environment and Sustainability Branch (E&S) are documented in the organisational structure and communicated to the organisation via the E&S intranet pages relating to the environmental program and EMS delivery. E&S Branch member qualifications, training, skills and experience are documented in the [E&S Skills Matrix](#) and [E&S Learning and Development Matrix](#) located on SharePoint branch collaboration site.

4.3.2 Induction and training

Safe and effective workplaces are established through appropriate induction and training delivery.

Prior to commencing work, all personnel (internal and external) are inducted to address site specific operation and maintenance activities and identify environmental requirements.

Training is provided at defined intervals or following major change to the plant or associated risks and controls.

Participants sign into sessions to demonstrate they are informed and understand their obligations. Records of site inductions and training are maintained in a database capturing training topic(s), list of participants and training delivery dates.

4.3.3 Operator competency

The Icon Water Operations Competency Framework provides operators with a learning pathway toward competency in the operation of our water and sewage treatment plants. The Framework is based on the National Water Package and the requirements for Water Industry Operators Association of Australia (WIOA) Certification of treatment operators.

In order for a candidate to meet the requirements of achieving a competency within the framework, the specified national competency must be validated through the completion of associated local competencies. The local competencies trigger operators to seek peer based training and assessment, followed in some case with technical engineering training and assessment for critical process systems.

4.4 Record keeping and document control

Corporate systems, including the IMS, are used to ensure the appropriate storage, distribution and control of documents and records including maintenance and complaints.

Controlled documents are uniquely identified with a revision number on each page and are approved prior to being issued to the personnel. All controlled document revision numbers are included in the file metadata for reference.

The records and documents for many business processes and decisions are retained in accordance with the *Territory Records Act 2002* (ACT).

4.4.1 Plans, specifications and charts

Icon Water's internal Drawing Management System stores work as executed plans for all utility infrastructure categorised by content in terms of architectural, civil, electrical, mechanical, instrumentation, structural, process and other general diagrams.

Functional specifications for equipment control and operational manuals are available electronically through Icon Water systems and are linked to specific equipment in the SCADA system.

Maintenance specifications, manuals and records are stored electronically in the Axle system. Hard copies of maintenance manuals (where available) may also be stored onsite for reference.

4.5 Complaints handling

Icon Water uses the Satisfy complaints management system combined with the complaints management policy and procedures ensure timely and consistent standards when responding to dissatisfied customers or persons that receive products and services. The policy and procedures are consistent with the *ACT Consumer Protection Code* and ISO 10002 – 2006 (Australian Standard Customer Satisfaction).

4.6 Emergency management and business continuity

Icon Water has an emergency management framework to enable the business to respond to any incident that may affect service delivery, life, property or the environment. The framework includes emergency plans, procedures, work instructions and templates.

4.6.1 Water Supply and Sewerage Emergency Plan

Icon Water's infrastructure have been designed to mitigate plausible system failures associated with flooding, power outage and blockages up to a defined standard. In the case of failures beyond design parameters or exposure to emergencies such as extensive power failure, major flooding, bushfire or terrorism, 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 infrastructure will be dealt with under this plan and sub plans (e.g. Dam Safety Plan Cotter River Dams).

Icon Water also has site-specific Incident Response Plans for all dams and reservoirs which comply with Section 43 of the *Work Health and Safety Regulation 2011* (ACT) and the *Utilities (Emergency Planning Code) Determination 2011* (ACT). The plan aims to provide initial response arrangements for incidents which may affect the dams or reservoirs.

Key emergency contacts are listed in Appendix A.

4.6.2 Bushfire Operational Plan

The annual Icon Water Bushfire Operational Plan provides a framework for bushfire prevention and preparedness at bushfire prone sites across Icon Water's asset base. The plan is prepared and approved in accordance with the *Emergencies Act 2004* (ACT) and the ACT Strategic Bushfire Management Plan.

The plan includes bushfire hazard assessments, identifies hazard reduction works and preventative actions to reduce risk at critical sites and provides guidance for bushfire preparedness actions.

4.6.3 Business Continuity Plan

The Icon Water Business Continuity Plan provides guidance on how Icon Water will prepare for, and recover from, a disruptive event that has an adverse impact on Icon Water's capacity to supply water and sewage services. The plan includes information relating to Icon Water's key products and services, as well as critical activities, recovery steps to be followed and associated resources.

4.6.4 Response and notification for incidents with an environmental consequence

Icon Water's reporting and investigation of incidents with an environmental consequence is managed through the [WI03.00.03 Environmental Incident Response and Notification](#) work instruction and the Guardian system which is used for the reporting and actioning of incidents (including non-compliances or environmental incidents). Any non-compliance events are documented and tracked and notification is made to the relevant regulatory body.

The environmental incident response process ensures that:

- Environmental impacts are minimised and remediation is undertaken as soon as possible;
- Clear communication is maintained to all relevant parties, including regulators throughout the duration of the incident; and
- Mitigation and improvement measures are identified and implemented as appropriate to reduce risk of recurrence. Reporting of such changes will be made to the EPA and other regulators as required.

5 Aspects and Impacts Register in corporate risk framework

5.1 Corporate risk assessment

Icon Water has adopted a framework based on an assessment of 'likelihood' and 'consequence' to generate a 'risk' rating. An uncontrolled extract of the [WI07.01.01 Risk Assessment Tables](#) is outlined below and may be subject to update following publication of this EMP.

The risk matrix used is presented in Table 1.

Table 1. Risk matrix used to explore risk pathways related to the operation of Icon Water's dams on the downstream environment

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost certain	Low	Medium	High	Very High	Very High
Likely	Low	Medium	High	High	Very High
Possible	Low	Medium	Medium	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Medium	Medium

The likelihood ranking is based on an assessment of the probability of the risk occurring in the next three years. The likelihood criteria are presented in Table 2.

Table 2. Likelihood criteria for use in the risk assessment

Rating	Likelihood of risk occurring in the next three years	
	Description	Estimated probability of occurrence
Almost certain	Almost certain to occur	> 90%
Likely	Is likely to occur in the current operational environment	61 – 90%
Possible	Will possibly occur in the current operational environment	21 – 60%
Unlikely	Is unlikely to occur in the current operational environment	2 – 20%
Rare	May occur in rare circumstances only	< 2%

The consequence criteria for environmental risks are presented in Table 3.

Table 3. Consequence criteria for use in the risk assessment

Level	Environmental consequence of risk event occurring
Severe	Widespread or severe impacts to environment, threatened species and/or long-term effects on ecological community or native vegetation.
Major	Major impacts to environment, threatened species or habitat, and/or damage to large area of native vegetation.
Moderate	Moderate impacts to environment, disturbance of threatened species or habitat, damage to heritage asset, and/or damage to native vegetation.
Minor	Minor effects to environment and/or disturbance of native vegetation.
Insignificant	Effects are limited to a small area, with a rapid recovery.

Likelihood and consequence are combined as per the risk matrix presented in Table 1. Icon Water has also identified a number of high level 'responses' to the risk ratings. The responses are provided in Table 4.

Table 4. Risk response

Risk rating	Required response
Very High	<p><u>Preferred treatment options:</u> avoid, transfer or mitigate.</p> <p>Requires immediate escalation and active management through continual monitoring. Review treatment strategies systematically to determine their adequacy and effectiveness against the required outcomes.</p> <p>Further controls are needed unless impractical or financially non-viable.</p>
High	<p><u>Preferred treatment options:</u> avoid, transfer or mitigate.</p> <p>Requires escalation through routine reporting and active management through systematic monitoring. Review treatment strategies routinely to determine their adequacy and effectiveness against the required outcomes.</p> <p>Additional controls may be required to protect Icon Water's interests and business.</p>
Medium	<p><u>Preferred treatment options:</u> mitigate or accept.</p> <p>Manage by specific monitoring or response procedures, with clear management responsibility.</p>
Low	<p><u>Preferred treatment options:</u> accept.</p> <p>Manage by existing routine procedures and work practices.</p>

5.2 Environmental aspects and impacts

The environmental aspects of an organisation are those activities, products and services of an organisation that have or can have a significant impact (both negative and positive) on the environment considering a lifecycle perspective.

The environmental aspects and impacts for Icon Water are identified and reviewed annually with key internal business leaders through an assessment of Icon Water's operations and activities and recorded in [EN03.02.01 Environmental Aspects and Impacts Register](#) (Appendix B).

The level of risk or opportunity is then assessed for each of the aspects and impacts in accordance with PO7 Governance, Risk and Quality, including the more detailed [EN07.01.34 Environmental Consequences Level](#) table. Operational controls or improvements are identified, assigned to a staff member to reduce that risk and improve environmental performance, and entered into Guardian for implementation and finalisation.

Approximately 60 impacts and benefits from business activities are identified across categories of air, land, water, waste, community, natural resources and energy, and staff (RRT-553, PRR Aspects and Impacts in Guardian, with uncontrolled copy provided at Appendix B for external parties).

Although this Register identifies all common impacts, site or activity specific EMP's may highlight particular impacts to the environment beyond the overarching aspects and impacts, and how those impacts may be mitigated and managed to be environmentally acceptable.

6 Assurance and review

6.1 Audit

Internal audits are undertaken as a primary level of management assurance to evaluate compliance with Icon Water's licence and other obligations and conformance with relevant standards, including the EMS. This program is planned on a risk basis by considering the environmental importance of operations in terms of its environmental aspects and impacts, environmental performance, reported incidents and the results of previous audits.

Records of audits are retained on the iconnect and recommendations from audits are entered into Guardian as actions as part of continuous improvement.

6.2 Inspection

Operational effectiveness evaluations are completed through an internal environmental inspection program. The inspections form a secondary level of management assurance as a routine and regular line management review of environmental risks and their treatments.

6.3 Performance monitoring and reporting

Specific environmental monitoring programs are outlined in the relevant activity or site specific EMP's and identified in Icon Water's Licence to Take Water (WU67), environmental discharge licenses for facilities and regulatory conditions of approval relating to the Murrumbidgee to Googong Water Transfer (M2G) and Enlarged Cotter Dam (ECD) water security projects.

Icon Water's overall environmental performance and progress on achieving organisational environmental objectives and targets is reported internally to our Executive Committee during the annual IMS management review process.

Icon Water also has a statutory requirement to report to the public on its environmental initiatives, environmental performance and contribution to ecologically sustainable development within our [Annual Report](#) to the ACT Government as our shareholder. We also report externally on environmental performance measures within our [Business Strategy: Statement of Corporate Intent](#).

6.4 Review

Review of EMPs will be undertaken at least every five years. The EMP review may identify the need for improved controls or the maintenance or amendment of processes.

A review may also be required following:

- a change in the scope of the facility;
- a change in the regulatory instruments in place;
- a significant environmental incident;
- a requirement to improve performance in an area of environmental impact;
- decommissioning of key plant; or
- natural disaster or force majeure affecting the treatment plant or associated infrastructure.

The review will ensure that the EMP is meeting Icon Waters statutory requirements, and will consider but is not limited to:

- compliance with the EMP;
- general environmental duty;
- matters raised by the regulator;
- contractor activities;
- training records;
- non-conformances, corrective actions closure;
- environmental monitoring results;

- record keeping and document control;
- resourcing, costs and benefits of environmental controls;
- monitoring and audit findings; and
- changes in standards and legislation, such as an update to relevant environmental guidelines.

Icon Water will amend the EMP to facilitate continuous improvement. Where a review identifies significant non-compliances the following procedures will apply:

- non-compliance or incident will be investigated by an appropriate team;
- agreed corrective actions will be identified by the team and reviewed by the Icon Water management;
- actions will be implemented to rectify the issue; and
- the effectiveness of the corrective actions will be assessed.

Appendix A – Emergency contacts

Table 5. Internal emergency contacts

Contact	Phone	Email
Icon Water Customers, Faults and Emergencies	6248 3111	talktous@iconwater.com.au
Environment and Sustainability	6180 6229	environment@iconwater.com.au
Lower Molonglo Water Quality Control Centre SMC	6180 6300	LMW_smc@iconwater.com.au
Stromlo Water Treatment Plant (WTP) Control Room	6180 6360	
Googong WTP Control Room	6180 6370	
Operations On-call	6175 2366	LMW_smc@iconwater.com.au
Water Distribution	6180 6309	IconWaterWDE@iconwater.com.au
Maintenance Services On-call Manager	6280 0369	Hydraulics.OncallManager@iconwater.com.au
Maintenance Services Dispatch	6242 1491	Hydraulics.dutymanager@iconwater.com.au

Table 6. External emergency contacts

Contact	Phone	Email
Emergency Services	000 (all phones and mobiles) 112 (GSM phones) 106 (text)	
ACT EPA	13 22 81	Environment.protection@act.gov.au
NSW EPA	13 15 55	
ACT Health	6205 1700 0435 963 482	HealthACT@act.gov.au hpsops@act.gov.au
NSW Health	13 77 88	

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

The Noggin incident management system contains an extensive current list of regulators and contact details for notification.

Appendix B – Aspects and Impacts Risk Report

The risk register RRT-553 capturing all risks from the EMS Aspects and Impacts Register is a live adaptive management approach in the Guardian risk management system.

A copy of the uncontrolled version of the risk register can be provided to regulators to support review of the Common EMP, which outlines corporate governance arrangements underpinning all site/activity-specific EMPs, noting that this is a static snapshot in time and will continue to evolve.