Internal





Environmental Management System Manual



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1. Definitions and Acronyms

AS/NZS ISO 14001:2015	Australian/New Zealand Standard™ Environmental Management Systems – Requirements with guidance for use. The Australian standard the sets out the requirement for environmental management systems
Board of Directors (Board)	Yarra Valley Water's Board of Directors that has overall responsibility for corporate governance which includes setting the strategic direction, establishing goals for management and monitoring the achievement of these goals and monitoring the performance of the business.
Competent Person	A person who has acquired the defined qualifications, knowledge and skills required to be proficient in their job and has demonstrated that proficiency in the workplace
Consultation	A two-way communication that takes the views of YVW executives, managers, leaders, employees and/or external stakeholders into consideration when making decisions relating to environmental management
Contractor	Contractor, subcontractor and/or labour hire company contractually engaged by YVW that undertake or manage environmental aspects on behalf of the organisation
Controlled Document	A "master" document that is the source of truth for environmental information. The controlled documents are available on the YVW website and if they are downloaded they are no longer controlled.
Corrective Action	An action that is taken to eliminate the cause of a non-conformity and that will prevent a reoccurrence.
Employee	A person who is employed by YVW who is not responsible for supervising other employees.
EMS	Environmental Management Systems – the system that comprises the EMS Manual, Environmental Management Framework and associated documents.
EMS Manual	Environmental Management System Manual (this document) is the overarching document established in conjunction with the organisation wide Environmental Management Framework for managing and improving environmental performance.
Environment	The surrounding in which YVW operates. This includes environmental elements such as air, water, land, natural resources, flora, fauna and humans and their interrelationships
Environmental Aspect	An activity or product or service that interacts or can interact with the environment. From a negative perspective (and the primary purpose of this Manual) the focus is on environmental aspects that have the potential to cause harm.
Environmental Audit	An assessment of the effectiveness of the implementation of YVW's Environmental Management System, Environmental Management Framework and associated Standards and Work Instructions or for YVW contractor's compliance with YVW requirements and obligations.
Environmental Documents and Records	Documents include the YVW Environment Policy, Environmental Management System Manual, Elements and Standards contained within the Environmental Management Framework, procedures, work instructions, guidelines and forms including all the records that are maintained to support environmental management.



Environmental Impact	A change to the environment, whether adverse or beneficial, resulting from an organisation's environmental aspects. An adverse impact may arise from an environmental aspect that is not managed, therefore resulting in harm.
Environment Legislation	Requirements set by State and Commonwealth legislation (in the form of Acts and Regulations). See Standard 3.2 Compliance Obligations
Environmental Management Framework	The Environmental Management Framework contains a series of "Elements" and "Standards" that support and provide directions and links to detailed system documents that complement and must be read in conjunction with this EMS.
Environmental Management System (EMS)	The EMS comprises a series of components that include the Environmental Management System Manual (EMS Manual), Environmental Management Framework and associated/reference guidance documents that include procedures, work instructions, checklists and management plans etc.
Environmental Objectives	An objective that is consistent with YVW's environmental policy, that sets an aim/goal/target for an intended outcome or operational criteria
ESC	Essential Services Commission
EPA	Environment Protection Authority. The EPA is the responsible authority for administering the Environment Protection Act 1970 & Environment Protection Act 2017 and associated subordinate documents.
Executive	The Managing Director and the Group General Managers form the Executive Team who have been delegated the day-to-day responsibility for operations and administration by the YVW Board.
НАССР	HACCP (Hazard Analysis and Critical Control Points) is a recognised Risk Management System for quality assurance of the potable water supply. It is the methodology used to identify, evaluate and control risks that may have an impact on the quality of the water from bulk water storage, the distribution network to the customer's potable water connection point.
Harm	An adverse effect on human health or the environment (of whatever degree or duration) and includes an adverse effect on the amenity of a place or premises that unreasonably interferes with or is likely to unreasonably interfere with the enjoyment of the place or premises; or a change to the condition of the environment to make it offensive to the senses of human beings.
Incident	An unplanned event that caused or could have caused harm to human health or the environment from waste and pollution.
KPIs	Key Performance Indicators, that set YVW objectives and targets.
Leader	Any staff member of YVW who has responsibility for supervising employees. This includes Divisional Managers, Team Leaders and Supervisors.
Leadership	The YVW Board, Executive Team and Division Managers
Managing Director	The Managing Director who has been delegated the day-to-day responsibility for operations and administration by the YVW Board
Material Harm	Harm that is caused by pollution or waste that Involves an actual adverse effect on human health or the environment that is not negligible or involves an actual adverse effect on an area of high conservation value or of special significance.



ΜΑΧΙΜΟ	Software utilised by YVW as an Asset Management System. It is the source of truth for all asset related data with the functionality to capture environmental information against assets.		
Notifiable Incident An incident that causes or threatens to cause material harm to human he environment that; a) involves an actual adverse effect on human health or the environ not negligible; or b) involves an actual adverse effect on an area of high conservation special significance; or c) results in, or is likely to result in, costs in excess of the threshold incurred in order to take appropriate action to prevent or minimize to rehabilitate or restore the environment to the state it was in b			
Opportunity	The likelihood that an environmental aspect will cause a positive risk benefit impact (a positive outcome) for the environment.		
Reasonably Practicable	Terminology given to the development of mitigation measures or controls while giving regard to the likelihood of those risks eventuating, the degree of harm that would result if those risks eventuated (i.e. the consequences), what the person concerned knows (or ought reasonably to know) about the harm or risks of harm and any ways of eliminating or reducing those risks, the availability and suitability of ways to eliminate or reduce those risks and the cost of eliminating or reducing those risks.		
Risk	The likelihood that an environmental aspect will cause harm and the adverse impact of that harm.		
SCAR Committee	Service, Community, Assets and Regulations Committee. The Service, Community, Assets and Regulation Committee assists the Board with oversight to ensure the business is currently meeting customer needs, community expectations and regulatory obligations, and insight and oversight of the business' plans to meet customer needs, engage with community and address regulatory requirements in the future.		
Significant Environmental Aspect	Any environmental aspects identified as having a residual environmental risk that are assessed to be either 'High' or 'Extreme' are automatically considered to be a "significant environmental aspects".		

2. Context of the organisation

2.1 Introduction

Yarra Valley Water (YVW) has developed this Environmental Management System Manual (EMS Manual), together with the <u>Environmental Management Framework (Section 2.5)</u>, to provide an overarching environmental management system that demonstrates how we manage our environmental risks and opportunities consistent with the requirements of AS/NZS ISO14001:2015. YVW has maintained AS/NZS ISO 14001 certification since 1996.

The purpose of the EMS is to establish an organisation wide framework for managing and improving environmental performance while still achieving a balance between society and the economy, to meet the needs of the present without compromising the ability for future generations.

The application of this EMS is intended to meet societal expectation for sustainable development, transparency and accountability that have evolved with:

- increasingly stringent legislation,
- the growing pressures on the environment from pollution,



- ineffective use of resources,
- improper waste management,
- climate change,
- degradation of ecosystems, and
- the loss of heritage and biodiversity values.

The intention of the EMS at YVW is to provide value for the environment, the organisation itself and interested parties. Consistent with the organisation's environmental policy, this EMS adopts a systematic approach to environmental management which is designed to achieve the following:

- Protect the environment by preventing or mitigating adverse environmental impacts,
- Mitigating the potential adverse effect of the environmental conditions on the organisation,
- Enhancement of YVW's environmental performance and the achievement of environmental objectives, that include the mitigation of risks and the implementation of opportunities,
- Assisting the organisation to fulfil its compliance obligations, and
- Ensuring communication of environmental information to relevant and interested parties.

2.2 YVW - the organisation and its context

Yarra Valley Water is one of Australia's largest water utilities, supplying water and sanitation services to two million Victorians and more than 58,000 businesses. YVW manages a \$5.1 billion asset portfolio stretching from Warburton in the east to Wallan in the north, an area of about 4000 square kilometres and our network consists of around 20,000 kilometres of water and sewer mains. YVW services more than 30 per cent of Victoria's population every day and covers some of Australia's fastest growing suburbs. YVW operates 10 sewage treatment plants across our service area. Several of these plants recycle water for use in home gardens, toilets and washing machines, and public spaces such as sports ovals. YVW generates renewable energy through our waste to energy facility at Wollert, solar panels at sewage treatment plants and a solar carpark at Mitcham head office.

Yarra Valley Water operates within a highly regulated, compliance and evidence-based environment. There is oversight from several Regulators and the Board. YVW actively seeks inputs and updates from interested parties such as our Customers, the Environment Protection Authority Victoria (EPA Vic), the Department of Treasury and Finance, and the Department of Environment, Land, Water and Planning (DELWP).

Yarra Valley Water has always recognised that the business is intertwined with the natural world that is reliant and interdependent on the environment, including influencing climate and the natural water cycle. Our whole business is based on taking water out of the environment and putting treated wastewater back in. Over the past few decades, we've made huge strides to ensure we're doing it in an ecologically sustainable way.

YVW Environmental Policy sets out the organisation's objectives to meet its duties in relation to environmental management, for establishing, implementing, developing, maintaining and continually improving the Environmental Management System Manual. *Refer to <u>Element 1</u> and <u>Standard 1.1</u>*

2.3 YVW 2030 Strategy

The 2030 Strategy comprises a statement of purpose that articulates the way we exist and the set of three strategic pillars and supporting themes that, when achieved collectively, will deliver for our customers, our shareholder, our people and our stakeholders. It is designed to keep the organisation focused and aligned on what is important and to integrate the expectations of all our different stakeholders (see figure 1).





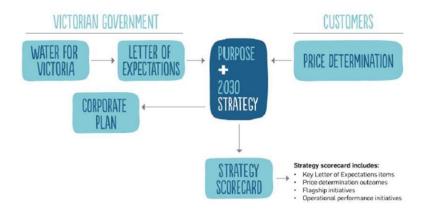
Figure 1. YVW 2030 Strategy

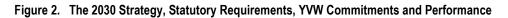
The YVW strategic directions match the Minister for Water's Letter of Expectations outlining seven priority areas that match our strategic commitments:

- 1. Climate change,
- 2. Customer and community outcomes,
- 3. Water for Aboriginal cultural, spiritual and economic values,
- 4. Recognising recreational values,
- 5. Resilient and liveable cities and towns,
- 6. Leadership and culture, and
- 7. Financial sustainability.

In addition, and in a well-regulated water industry, our regulatory stakeholders have well-articulated environmental and management system requirements and expectations.

The corporate plan is our commitment to Government and is structured around our 2030 Strategy. It addresses our statutory obligations and the specific requirements outlined in the Ministerial Letter of Expectations and Corporate Plan Guidelines. The strategy scorecard is the primary tool used to measure progress and achievement of the 2030 strategy (see figure 2)







2.4 **Expectations**

The expectations of the Board and the Executive team are documented in YVW's <u>Environmental Policy</u> together with YVW's 2030 strategic pillar of "Lead for our Environmental Future", through the themes of;

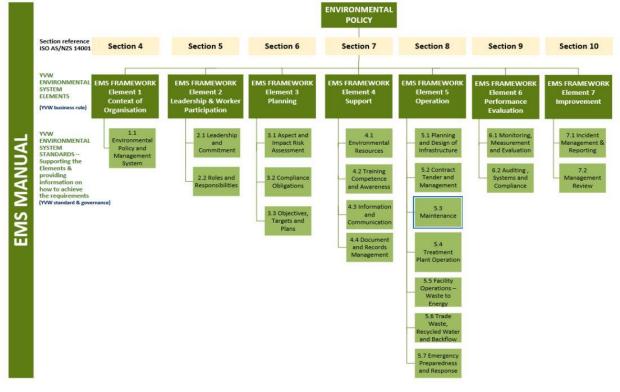
- Beyond Zero Carbon
 - We provide renewable energy to others
 - We are absorbing carbon and enabling energy efficiency (decarbonisation)
- Circular Economics
 - o Recycled and reprocessed materials are integrated into our construction and maintenance practices
 - We transform our treatment plants to focus on resource recovery
- Healthy Ecosystems
 - We are actively working to always improve the health of land, water, air and ecosystems
 - We have improved the resilience and extent of habitats and native species on our land and across our service area

2.5 Scope of the EMS

The scope of the YVW EMS encompasses all YVW environmental aspects, namely, activities, products and services that will or can impact on the environment and is managed using the <u>Environmental Management Framework</u>.

YVW's environmental aspects are associated with the provision of water and sanitation services of the organisation and include; water quality management and supply of water; collection, treatment and transfer of sewage and trade waste, disposal and reuse of effluent, reuse from waste to energy (ReWaste) as well as the support infrastructure to sustain these activities.

The Environmental Management Framework contains a series of "Elements" and "Standards" that support the Environmental Management System, to address the environmental aspects associated with YVW operations. The elements are one-page, high level documents that outline what must be undertaken to establish and maintain environmental practices as outlined in AS/NZS ISO 14001:2015 certification. The Standards are a set of documents that support the Elements and provide easy to follow information to meet the requirements of the Element. These Standards are further supported by work instructions and operational risk controls that set out the detailed actions to meet YVWs environmental commitments. The Elements and Standards of the system are outlined in figure 3.







The Environmental Management System, together with the implementation of the <u>Environmental Management</u> <u>Framework</u> adopts the Plan, Do, Check and Act model depicting the YVW process outlined in Figure 4.

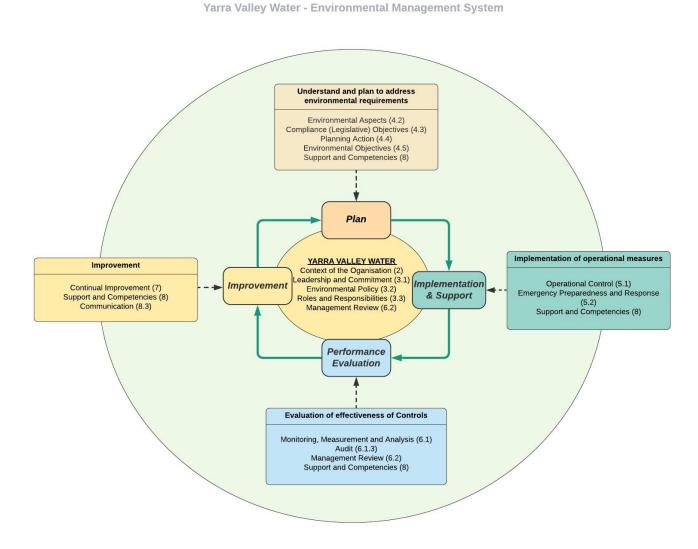


Figure 4 - YVW Environmental Management System (Including the reference to relevant EMS Sections within this document)

2.6 Environmental Management System Requirements

The ISO 14001:2015 sets out the systematic approach to environmental management addressing; Leadership, Planning, Support, Operation, Performance Evaluation and Improvement. This approach is utilised to define activities and actions that will be undertaken by YVW to manage environmental aspects, fulfil compliance obligations, and address the risks to mitigate harm to community health and the environment and opportunities to achieve improved community based and environmental outcomes.

This EMS is established, documented, implemented, maintained so that reoccurring activities undergo continual improvement to enhance performance in accordance with the requirements of ISO 14001:2015.



3. Leadership

3.1 Leadership and commitment

YVW's leadership, defined as the YVW Board, Executive Team and Division Managers, commit to actively promoting accountability for managing, or ensuring the management and implementation of this EMS.

YVW's leadership supports the resourcing and successful implementation of the EMS through;

- hands on support,
- establishing the context and objectives for the protection of the environment, and;
- the participation in management review and continual improvement of YVW's management for the protection of environmental values.

YVW leadership demonstrates a commitment to the environmental management system by:

- Taking accountability for the effectiveness of this EMS,
- ensuring the Environmental Policy <u>YPOL0053</u> and objectives are established and are compatible with the strategic directions, and our environmental risks and opportunities,
- ensuring the integration of the EMS requirements into the business processes,
- communicating the importance of effective environmental management through the implementation of this EMS,
- ensuring that the EMS achieves its intended outcomes,
- directing and supporting YVW staff to contribute to the effectiveness of the EMS,
- promoting continual improvement, and
- supporting other relevant management roles to demonstrate their leadership for their areas of responsibility.

The commitment of YVW Board, Executive team and Division leaders for planning, operation, performance evaluation and environmental improvement is detailed within the <u>Environmental Management Framework</u>.

Guidelines describing the actions for leadership and commitment are outlined in <u>Standard 2.1</u> EMS Leadership and Commitment of the Environmental Management Framework.

3.2 Environmental Policy

The Environmental Policy <u>YPOL0053</u> provides the overall environmental vision of YVW that is further defined by the YVW environmental objectives and targets of <u>Section 6.2</u>. The Environmental Policy is endorsed by the YVW Board of Directors and is reviewed by the Executive team every two years, or as triggered by significant changes.

The Environmental Policy includes:

- the framework for setting environmental objectives,
- a commitment to the protection of the environment and the prevention of pollution,
- a commitment to fulfil any compliance obligations, and
- a commitment to continual improvement of the environmental management system to enhance environmental performance.

Guidelines for how the <u>Environmental Policy</u> is developed and managed are outlined in <u>Standard 1.1</u> Environmental **Policy and Management System**)

3.3 Organisational Roles, Responsibilities and Authorities

The roles and responsibilities at YVW for the protection of environmental values and community health are shared across the organisation. This includes responsibilities assigned to;

- The Board of Directors,
- Managing Director,
- General Managers,
- Divisional Managers,



- Team Leaders,
- Staff including IMS personnel, contract managers, and
- Business partners

A detailed overview of the organisation's roles and responsibilities is outlined in <u>Standard 2.2</u> EMS Roles and Responsibilities.

There are also responsibilities from several Regulators, Government Authorities and internal committees that YVW responds to. These include;

- Environment Protection Authority Victorian (EPA Vic),
- Department of Treasury and Finance,
- Department of Environment, Land, Water and Planning (DELWP),
- Essential Services Commission,
- YVW Risk Management and Audit Committee (RMAC), and
- Service, Community, Assets and Regulations Committee (SCAR).

A table detailing Environmental roles and responsibilities withing YVW can be found in <u>Standard 2.2</u> EMS Roles and **Responsibilities** of the <u>Environmental Management Framework</u>.

4. Planning

4.1 Actions to address risk and opportunities

4.1.1 General

YVW manages the EMS through the <u>Environmental Management Framework</u> that incorporates all the actions required to identify risk and opportunities and obligations through the following standards:

- Environmental Aspects <u>Standard 3.1</u> EMS Environmental Aspect and Impact Risk Assessment;
- Compliance Obligations <u>Standard 3.2</u> Compliance Obligations;
- Environmental Objectives <u>Standard 3.3</u> EMS Objectives Targets and Plans; and
- Planning Action <u>Standard 5.1</u> EMS Planning and Design of Infrastructure.

4.2 Environmental Aspects

4.2.1 Actions to Identify Environmental Aspects and Opportunities

Risk assessments are undertaken in accordance with the "Environmental Aspect and Impact Assessment Process" <u>Standard 3.1</u> EMS Environmental Aspect and Impact Risk Assessment <u>YVWCD-2-7767</u> utilising the Environmental Risk Assessment Template <u>YVWCD-2-7765</u>. All risk assessments, across the organisation, are combined to form the organisation's Aspects and Impacts Risk Register <u>YVWCD-2-6416</u>.

Any environmental aspects identified as having a residual environmental risk that is either 'High' or 'Extreme' is automatically considered to be a "significant environmental aspect". A significant environmental aspect could be as a result of not complying with YVW legislative obligations or of causing serious harm to the environment.

All significant environmental aspects ranked 'High' and 'Extreme' are actively managed through the implementation of mitigation measures and controls which have been identified by the environmental aspects, impacts, risks and opportunities assessment process.

YVW examines each area of business for environmental aspects, impacts, risks and opportunities annually, or as triggered by an event, or change of regulation or operation.

In addition to regular reviews by Divisions, a process exists for identifying environmental values and risks posed by environmental aspects as specific works/projects are planned. Refer to <u>Standard 5.1</u> EMS Planning and Design of *infrastructure*.



4.3 **Compliance Obligations**

YVW subscribes to both Enviro Law and Law Compliance to monitor environmental legislation updates and changes.

An <u>Environmental Checklist</u> is populated from <u>Enviro Law</u> every 12 months and maintained by the IMS Division. Review of compliance obligations governing environmental aspects occurs annually to capture any changes. Compliance obligations applicable to environmental aspects are documented in the *Environmental Aspects, Impacts, Legal & Other Requirements Register* as per **Standard 3.2 EMS Compliance Obligations**.

The Environmental Risk Assessment Template <u>YVWCD-2-7765</u> contains links to <u>Enviro Law</u> to provide access to detailed information regarding the organisation's compliance obligations.

The <u>Law Compliance</u> subscription is utilised to maintain the <u>Governance Register</u>, the whole of business compliance obligations register. The Governance Register is managed through Risk and Corporate Services and is a tool to inform of updates and changes to legislation, and to assign deliverables to Divisional Managers. The application of these changes is identified and implemented by the individual obligation owner.

4.4 Planning Action

The YVW Environmental Aspects and Impacts Risk Register <u>YVWCD-2-6416</u> identifies risks, and controls to be implemented to manage significant environmental aspects – see <u>Standard 3.1</u> Environmental Aspect and Impact **Risk Assessment**

The controls are articulated and the rating, risk ranking, agreed among stakeholders is guided by the Corporate <u>Risk</u> <u>Toolbox</u>

4.5 Environmental Objectives

Based on the YVW Environmental Policy, strategic direction and significant environmental aspects, environmental objectives and targets are established, implemented and maintained. This process is outlined in detail in <u>Standard 3.3</u> **EMS Objectives Targets and Plans** and outlines;

- Setting objectives,
- Developing Actions and Targets,
- Communication, and
- Monitoring progress.

5. Operation

5.1 **Operational Control**

YVW establishes, implements, controls and maintains processes needed to meet the EMS requirements and implement actions identified in environmental aspects and objectives through the use of the controlled document management system. This is broken down in the high level <u>Environmental Management Framework</u> to identify management requirements, specifically for the management and/or protection of environmental values by the relevant Divisional areas. Operational control includes the following:

- The planning and design for the creation of new infrastructure <u>Standard 5.1</u> EMS Planning and Design of infrastructure,
- The preparation of tender documents that set out contractual requirements, the engagement of contractors and construction management – <u>Standard 5.2</u> EMS Contract Tender and Management;
- The management of maintenance activities Standard 5.3 EMS Maintenance;
- The operation of infrastructure (water, sewer and treatment plants) <u>Standard 5.4</u> EMS Treatment Plant Operation;
- Facility operation Standard 5.5 EMS Facility Operations Waste to Energy, and
- The protection mechanisms in place for the management of trade waste, recycled water and protection from backflow - <u>Standard 5.6</u> EMS Trade Waste, Recycled Water and Backflow.

Each of the above-mentioned Standards identifies the processes that will be adhered to for the protection of human health and environmental values.



5.2 Emergency Preparedness and Response

YVW maintains procedures that identify potential emergency situations and potential accidents that can impact the environment and how it will respond to them to mitigate environmental impacts. The management principles and necessary reference documents are contained in <u>Standard 5.7</u> EMS Emergency Preparedness and Response.

<u>Standard 5.7</u> EMS Emergency Preparedness and Response addresses the operational failure of water (including recycled water) and sewer infrastructure and the operation of treatment plants. It sets out YVW objectives and procedures for the management of emergencies associated with contractor managed activities for the construction and maintenance of YVW infrastructure.

Environmental incidents resulting in a high or extreme environmental impact are investigated in accordance with <u>YFRM0629</u> ICAM (Incident Cause Analysis Method) Investigation Report and <u>YWIN0895</u> ICAM (Incident Cause Analysis Method) Investigation Debrief. Refer to <u>Standard 5.7</u> Emergency Preparedness and Response.

6. Performance Evaluation

6.1 Monitoring, Measurement, Audit, Analysis and Evaluation

6.1.1 General

YVW maintain procedures to monitor and measure, on a regular basis, the key characteristics of its operations that can significantly impact the environment.

YVW utilises monitoring of and audit for the evaluation of compliance with its environmental systems and applicable compliance obligations.

Where monitoring equipment is utilised by either YVW or its contractors, it will be calibrated in accordance with manufacturer standards. Calibration or verification of YVW monitoring equipment and associated records are managed by the specific Divisional areas of the organisation that use such equipment.

Area of impact:	Monitoring Program	Responsibility
Global warming	Greenhouse gas emissions, include electricity consumption	Asset Planning
Nutrients	Connection of unsewered properties (septic tank) to new sewer/Backlog program	Community Sewerage Planning
	After Sewage spills (return to normal)	Asset Optimisation
	STP effluent monitoring	Asset Optimisation (STP Planning)
	Class A recycled water (as per EMP)	Asset Planning (Water Planning)
Water extraction	Potable water consumption	Water Growth Planning

Key characteristics currently monitored and measured are shown in the following Monitoring Matrix:

6.1.2 Monitoring

YVW sets monitoring requirements to address the evaluation of the organisations environmental performance associated with the management of its significant environmental aspects and how it's tracking to meet YVW objectives and targets. Monitoring requirements are implemented for the following aspects of YVW operations in accordance with the reference Environmental Management Framework Standards:

- The acceptance of trade waste, the supply of Class A recycled water and for the protection from backflow of water from customers into YVW water supply infrastructure – See <u>Standard 5.6</u> EMS Trade Waste, Recycled Water and Backflow,
- Construction contractor management Standard 5.2 EMS Contract Tender and Management,
- Maintenance contractor management <u>Standard 5.3</u> EMS Maintenance



- The operation of water, sewer and treatment plants <u>Standard 5.4</u> EMS Treatment Plant Operation. Monitoring and reporting guidelines for treatment plants are outlined in <u>YVWCD-2-5559</u> Treatment Plant Licence/Performance Requirements and supported by ESC Treatment Plant rules and <u>YVWCD-2-7868</u> Laboratory sample upload documents, and
- The operation of waste to energy operations (ReWaste) <u>Standard 5.5</u> EMS Facility Operations Waste to Energy.

Each of the above Environmental Management Framework Standards identifies the monitoring objectives that will be implemented to verify the successful protection of environmental values.

For example, regulatory and internal reporting for treatment plants is the responsibility of Treatment Plant Optimisation Team is listed below. Procedures followed are outlined in <u>YVWCD-2-5559</u> Treatment Plant Licence/Performance Requirements.

Report	Frequency
Treatment Plants Performance reports	Monthly
Managing Director's Report	Monthly
EPA Incident Report	As per Licence
Odour Complaints Report	Monthly
EPA Annual Performance Statement	Annual
National Pollutants Inventory (NPI) Emission Report	Annual
Bureau of Meteorology (BOM) Report	Annual
Report to the Essential Services Commission	Annual
Report to the Victorian Auditors General Office	Annual
National Performance Framework	Annual
Corporate Plan KPI	Quarterly
Input to Treatment Plant Planning's monitoring program	Annual

6.1.3 Audit

Audits are utilised by YVW as an evaluation tool to:

- Evaluate compliance with the EMS, Legislative obligations, Standards and Work Instructions etc for the protection of environmental values, and
- To maintain knowledge and understanding of the organisation's compliance status.

Four audit programs that are utilised by Yarra Valley Water to evaluate its compliance obligations. They include:

- External audits
- Internal Audits,
- Assurance Audits
- Local Audits

Audits are undertaken with consideration to risk and serve the purpose of testing the adequacy of YVW controls for the mitigation of strategic and operational risks, help improve YVW's management systems and procedures and provide assurance to the Board and Executive that the EMS and associated objectives are being met. Refer to <u>Standard 6.2</u> **EMS Auditing - Systems and Compliance**. Following is an overview of each of the audit type.

6.1.3.1 External Audits

YVW must comply with certain regulatory requirements to retain its operating licences. In addition to this YVW has implemented International standard accreditations. These are Quality ISO 9001; Environment 14001:2015; Safety AS/NZS 4801 (to be replaced by AS/NZS 45001 in 2021) and HACCP. Statutory audits by regulatory authorities and those undertaken for the maintenance of ISO accreditation comprise the suite of YVW's external audit program.

The regulatory audits are controlled and performed by the regulatory body and the accreditation audits are performed by and certified (JASANZ registered certification body) external auditor under the engagement of YVW.



6.1.3.2 Internal Audits.

Internal audits are undertaken as part of the Board of Governance approved internal audit schedule that forms part of YVW's self-assessment audit program. The internal audit program is developed by an external Board Auditor in cooperation with the Board of Governance and Risk & Corporate Services. They are conducted to assess YVW's compliance with regulatory requirements, licenses, approvals and environmental management system according to an annual schedule which is developed with input from leadership.

The Risk and Corporate Services Division is responsible for managing the YVW internal audit programs across the quality, safety and environment disciplines.

6.1.3.3 Assurance Audits

Assurance audits are undertaken by the auditor that has completed the internal audit program. These audits examine the outcomes of all internal audits that have been conducted. An assurance audit will review and assess the implementation of any corrective actions that have been developed in response to non-conformances raised by external audits to:

- Verify that they have been closed out within the required timeframes,
- That corrective actions have been implemented, and
- That corrective actions adequately address any identified deficiencies and are effectively controlling risk or enhancing opportunities.

Any identified actions, resulting from an internal audit, are closed out by the assurance audit once the auditor is satisfied that the corrective and preventative actions have been applied and that they adequately address the internal audit findings.

6.1.3.4 Local Audits

The IMS Compliance Team manages and implements the local audit program that is developed and implemented to assess the compliance of its contractors who undertake activities on YVW behalf.

IMS develops a Local Audit program that may include input from the Division responsible for the maintenance of YVW infrastructure. Additional audits may be scheduled depending on the projects, emergency work or other unscheduled activities that require compliance observation.

The local audit schedule utilises a risk-based approach to develop the Local Audit program that utilises the Aspects and Impact Register, developed by the Divisions. The Register will identify aspects of the maintenance program, with the greatest risk(s), that will be included in the audit schedule.

6.2 Management Review and Outputs

Executives and Leadership undertake reviews of YVW operations, giving regard to the implementation of our Environmental Management System, compliance obligations and the opportunities for continuous improvement. Outputs from the reviews are used to develop actions that may include the development of the strategic objectives, targets and plans for the next planning period. See <u>Standard 7.2</u> *EMS Management Review and Outputs.*

Management review for YVW operations and compliance with the Environmental Management System is undertaken on a number of levels. Reporting to management includes:

- Progress with meeting the objectives and targets, incorporated in the Strategy Scorecard. This is reported monthly to the Executive team. See <u>Standard 3.3</u> EMS Objectives, Targets and Plans,
- The Board's Risk Management and Audit Committee is informed of audit findings, including environmental performance, non-conformances and corrective/preventative actions. See <u>Standard 6.2</u> EMS Auditing – Systems and Compliance, and



• The Executive and Board are informed monthly of incidents and emergency response associated with the failure of infrastructure/system operations. See <u>Standard 7.1</u> EMS Incident Management.

The Executive and the Board will be informed of changes to legislative requirements that will change the expectation of relevant Authorities, and that will result in changes to YVW's compliance obligations.

The Board's Risk Management and Audit Committee will be provided with the Corporate Aspects and Impacts Register that will inform the Committee of all significant environmental aspects, the risks and opportunities.

In addition, the Executive Team reviews elements of the EMS and its application, including environmental performance, non-conformances, Strategy Objectives and Targets and complaints, through its review of the Business Review Monthly (BRM) Performance Report and the Strategy Scorecard. These reviews are detailed in the <u>Review of Environmental Management System Business Rule (YBUS0156)</u>.

7. Continual Improvement

YVW utilises monitoring programs (<u>Section 6.1.2</u>), audit programs (<u>Section 6.1.3</u>), and the learnings from responses to emergencies and incidents (<u>Section 5.2</u>) to review and improve the adequacy and effectiveness of its Environmental Management System, the EMS Manual and the Environmental Management Framework and associated guidance documentation.

Nonconformity with this EMS and the Environmental Management Framework, or, the occurrence of an environmental incident or emergency, will require an investigation to be undertaken and that corrective actions are identified and implemented.

Where audits of YVW's operations identify nonconformance(s), they will be managed in accordance with <u>Standard 6.2</u> **EMS Auditing and Compliance**. This Standard sets out the processes to be implemented to identify corrective and/or preventative actions that will result in the continual improvement of YVW operations.

<u>Standard 7.1</u> EMS Incident Management identifies the process that will be undertaken in response to incidents and emergencies. This includes the requirement for an initial response, an investigation, the identification of the root cause, and the corrective and preventative action(s) that are to be implemented.

Environmental Performance is also assessed through the Strategy Scorecard, the primary tool used to measure progress and achievement of the Corporate Strategy and integrate the key expectations of different stakeholders (see figure 2). This is reported quarterly to the board alongside the Group Plan Scorecard that set and monitor relevant environmental operational measures under the Corporate Plan. *Refer to EMS <u>Standard 6.1</u> EMS Monitoring Measurement and Evaluation.*

8. Support and Competencies

8.1 Resources

Human resources, specialised skills, organisational infrastructure, technology and financial resources are crucial to maintaining and improving the YVW EMS and associated system documentation.

YVW utilises a dedicated Integrated Management System (IMS) Division who owns the EMS and ensures it is implemented and maintained per ISO 14001:2015 requirements. The IMS Division is also responsible for reporting the EMS performance for review (including recommendations for improvement) to the YVW executive team. *Refer to* <u>Standard 4.1</u> EMS Environmental Resources.

8.2 **Competence and Awareness**

YVW ensures all employees who carry out activities with the potential to impact the environment are competent based on relevant education, training and/or experience.



<u>Standard 4.2</u> EMS Training Competence and Awareness, details employee induction, the identification of training needs, and an assessment and recording of competency.

Awareness of the EMS, the Environmental Management Framework and relevant guidance documentation is included as part of the onboarding process. Team members who have specific roles within the EMS receive targeted training and refreshers as required. Refer to <u>Standard 4.2</u> EMS Training Competence and Awareness

8.3 Communication

8.3.1 General

YVW will communicate both internally and externally, as required, on environmental aspects that are relevant to the organisation.

Communication by YVW will include as required:

- Changes to legislative requirements and associated obligations,
- Changes to the EMS, Work Instruction, business rules etc, that will alter how activities will need to be undertaken or managed,
- Outcomes/learnings resulting from environmental incidents and associated preventative actions, and
- Outcomes of internal and external environmental audits, particularly in response to non-conformances and corrective and/or improvement actions.

Communication is undertaken in accordance with <u>Standard 4.3</u> EMS Information and Communications.

9. Document and Records Management

The <u>Environmental Management Framework</u> links to the YVW Controlled document system. Documents are created and updated in accordance with YVW's Controlled Document Business Rule. Documents are reviewed and approved for suitability and adequacy by the owner of the document. Refer to <u>Standard 4.4</u> Document and Records Management.

An EMS document roadmap has been developed as a quick reference guide. See Attachment 1.



10. Attachment **1** – EMS Document Road Map

Element	Standard	Related Work Instructions / information
YVWCD-2-7840 EMS Element 1 Context	YVWCD-2-7847 EMS Standard 1.1 Environmental Policy and	YPOL0053 The Environmental Policy
of the Organisation	Management System	
YVWCD-2-7841 EMS Element 2	YVWCD-2-7848 EMS Standard 2.1 Leadership and Commitment	
Leadership and Worker Participation	YVWCD-2-7849 EMS Standard 2.2 Roles and Responsibilities	
<u>YVWCD-2-7842</u> EMS Element 3 Planning	YVWCD-2-7767 EMS Standard 3.1 Aspect and Impact Risk Assessment	YVWCD-2-6416 YVW Operational Environmental Aspects and Impacts Risk Register YVWCD-2-7723 Risk Toolbox 2020 YVWCD-2-7765 YVW Environmental Risk Assessment Template YVWCD-2-7280 Corporate Operational Risks and Opportunities (Extreme & High) Register YVWCD-2-5030 YVWCD-2-5030 Risk Management Framework – Identification & Assessment Process YVWCD-2-7765 YVWCD-2-7765 YVW Environmental Risk Assessment Template Governance Register Environmental Checklist YVWCD-2-7280 Corporate Operational Risks and Opportunities (Extreme & High) Register YVWCD-2-7280 Corporate Operational Risks and opportunities register (Medium
	YVWCD-2-7852 EMS Standard 4.1 Environmental Resources	and low) Webpage referring to 2030 strategy and Score Card -
	YVWCD-2-7853 EMS Standard 4.2 Training Competence and Awareness	RAAM IMS Roles and Accountability Matrix
YVWCD-2-7843 EMS Element 4 Support	<u>YVWCD-2-7854</u> EMS Standard 4.3 Information and Communication	IMS Source Page
	YVWCD-2-7855 EMS Standard 4.4 Document and Records Management	<u>YVWCD-2-7235</u> YVW Controlled Document Business rule <u>YVWCD-2-6225</u> Document Controller User Guide <u>YVWCD-2-7238</u> Document Review and Control



Element	Standard	Related Work Instructions / information
	YVWCD-2-7856 EMS Standard 5.1. Planning and Design of Infrastructure YVWCD-2-7857 EMS Standard 5.2. Contract Tender and Management	Procurement and Contract Governance Manual YVWCD-2-7135 Project Risk Assessment Template (growth futures – planning) YVWCD-2-4691 Mid and Post Implementation Review Guidelines. YFRM0282 Capital Delivery Checklist YVWCD-2-7135 Project Risk Assessment Template Lessons Learned register YWIN0874 Interview of tenderers YWIN16665 Asset Creation Audit Checklist YFRM0282 Capital Delivery Checklist YFRM0281 Project Audit Plan YVWCD-2-4691 Mid and Post Implementation Review Guidelines. YSGD0251 Post Implementation Review Guidelines
	<u>YVWCD-2-7858</u> EMS Standard 5.3. Maintenance	YSGD0392 Provision of Asset Maintenance and Services contract template <u>YWIN0874</u> Interview of tenderers YSGD0392 Provision of Asset Maintenance and Services contract template
<u>YVWCD-2-7844</u> EMS Element 5 Operation	YVWCD-2-7859 EMS Standard 5.4. Treatment Plant Operation)	Procurement and Contract Governance Manual <u>YVWCD-2-6416</u> YVW Operational Environmental Aspects and Impacts Risk Register. YVW063 STP063 Emergency Management Manual – Treatment Plant local copy TP environmental checklist - <u>Treatment Plant local copy</u>
	<u>YVWCD-2-7860</u> EMS Standard 5.5. Facility Operations – Waste to Energy	YVWCD-2-6416_YVW Operational Environmental Aspects and Impacts Risk Register Procurement and Contract Governance Manual
	<u>YVWCD-2-7861</u> EMS Standard 5.6. Trade Waste, Recycled Water and Backflow	YWIN0864 Managing Threats YWIN0386 First Aid, Infection Control and Medical Conditions Requiring Special Considerations YVWCD-2-5030 Risk Management Framework – Identification & Assessment Process YVWCD-2-6773 Backflow Prevention Containment Guidelines YSGD0457 Integrated Sewage Quality Management System (ISQMS) YVWCD-2-7097 Class A Recycled Water Agreement YVWCD-2-4192 Class A Recycled Water Agreement Template Environmental Improvement Plan (EIP) (YVW Template)
	<u>YVWCD-2-7862</u> EMS Standard 5.7. Emergency Preparedness and Response	YVWCD-2-4777 Incident and Emergency Response Plan

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Element	Standard	Related Work Instructions / information
	<u>YVWCD-2-7863</u> EMS Standard 6.1. Monitoring, Measurement and Evaluation	<u>YVWCD-2-5559</u> Treatment Plant Licence/Performance Requirements <u>YVWCD-2-7868</u> Laboratory sample upload documents <u>YVWCD-2-7867</u> ESC Treatment Plant rules <u>Review of Environmental Management System Business Rule (YBUS0156).</u>
<u>YVWCD-2-7845</u> EMS Element 6 Performance Evaluation	<u>YVWCD-2-7864</u> EMS Standard 6.2. Auditing, Systems & Compliance	YVWCD-2-6416 YVW Operational Environmental Aspects and Impacts Risk Register YVWCD-2-7280 Corporate Operational Risks and Opportunities (Extreme & High) Register YVWCD-2-7284 Corporate Operation Risk and opportunities register (Medium and low) YVWCD-2-4477 IMS Compliance Auditing Guide (YREF0158) Procurement and Contract Governance Manual YWIN0059 Internal Audit (Work Instruction). Governance Register Governance Register
<u>YVWCD-2-7846</u> EMS Element 7 Improvement	YVWCD-2-7865 EMS Standard 7.1. Incident Management & Reporting	YVWCD-2-4777 Incident and Emergency Response Plan. YSGD0457 Integrated Sewage Quality Management System (ISQMS) YVWCD-2-7657 (User guide for creating declared incident event in MAXIMO). YWIN0430 EPA Notification of Dry Weather Sewer Spills from Network Assets YFRM0629 ICAM (Incident Cause Analysis Method) Investigation Report YWIN0895 ICAM (Incident Cause Analysis Method) Investigation Debrief.
	YVWCD-2-7900 EMS Standard 7.2 Management Review and Outputs	



11. Attachment 2 – Comparison Matrix – ISO 14001:2015 with YVW EMP Manual and Environmental Framework

AS/NZS ISO 14001:2015 Requirement	EMS Manual Reference	Environmental Framework Reference
4 - Context of Your Company		
4.1 - Understand Your Company and Its Context	• Section 2.2	 EMS Element 1 Context of the Organisation EMS Standard 1.1 Policy and Management System
4.2 - Understanding the Needs and Expectations of Interested Parties	Section 2.4Section 4.3Section 6.2	 EMS Element 3 Planning EMS Standard 3.1 Aspect and Impact Risk Assessment EMS Standard 3.2 Compliance Obligations
4.3 - Determining the Scope of the Environmental Management System	Section 2.5	 EMS Element 1 Context of the Organisation EMS Standard 1.1. Policy and Management System
4.4 - Environmental Management System	 EMS Manual Section 2.5 (Figure 4) Section 2.6 	 EMS Element 3 Planning, EMS Standard 3.2 Compliance Obligations EMS Standard 4.4 Document and Records Managemer EMS Element 5 Operations EMS Standard 5.1 Planning & Design of Infrastructure EMS Standard 5.2 Operational Contract Tender Mgt EMS Standard 5.3 Maintenance EMS Standard 5.4 Network Operation (in progress) EMS Standard 5.5 Facility Ops – Waste to Energy EMS Standard 5.6 Trade Waste RW& Backflow EMS Element 6 Performance Evaluation
5 - Leadership		
5.1 - Leadership and Commitment	Section 3	 EMS Element 2 Leadership EMS Standard 2.1 Leadership and Commitment
5.2 - Policy	Section 3.2	 EMS Element 1 Context of the Organisation (Link to Policy YVW Environmental Policy
5.3 - Organizational roles, Responsibilities and Authorities	• Section 3.3	 EMS Element 2 Leadership EMS Standard 2.2 Roles and Responsibility EMS Element 6 Performance Evaluation
6 - Planning		
6.1 - Actions to address risks and op	oportunities	
6.1.1 - General	 Section 2.5 (Figure 4) Section 4.1 	 EMS Element 3 Planning EMS Standard 3.1 Aspects & Impact Risk Assessment EMS Standard 3.2 Compliance Obligations EMS Standard 3.3 Objectives, Targets and Plans.
6.1.2 - Environmental Aspects	Section 4.2Section 4.4	 EMS Element 3 Planning EMS Standard 3.1 Aspects & Impact Risk Assessment
6.1.3 - Compliance Obligations	• Section 4.3	 EMS Element 3 Planning Standard 3.2 EMS Compliance Obligations
6.1.4 - Planning Action	• Section 4.4	 EMS Element 3 Planning EMS Standard 3.1 Aspects & Impact Risk Assessment



AS/NZS ISO 14001:2015 Requirement	EMS Manual Reference	Environmental Framework Reference		
6.2 - Environmental objectives and planning to achieve them				
6.2.1 - Environmental objectives	Section 4.5	 EMS Element 3 Planning Standard 3.3 Objectives, Targets & Plan 		
6.2.2 - Planning actions to achieve environmental objectives	Section 4.4	 EMS Element 3 EMS Planning EMS Standard 3.3 Objectives, Targets & Plans 		
7 - Support				
7.1 - Resources	Section 8.1	 EMS Element 4 Support EMS Standard 4.1 Environmental Resources 		
7.2 - Competence	Section 8.2	 EMS Element 4 Support, EMS Standard 4.2 Training, Competence & Awarenes 		
7.3 - Awareness	Section 8.2	EMS Standard 4.2 Training, Competence & Awarenes		
7.4 - Communication	I			
7.4.1 - General	Section 8.3	 EMS Element 4 Support EMS Standard 4.3 Information and Communication 		
7.4.2 - Internal Communication	Section 8.3	 EMS Element 4 Support EMS Standard 4.3 Information and Communication 		
7.4.2 - External Communication	Section 8.3	 EMS Element 4 Support EMS Standard 4.3 Information and Communication 		
7.5 - Documented Information				
7.5.1 - General	Section 9	 EMS Element 4 Support EMS Standard 4.4 Document and Record Management 		
7.5.2 - Creating and Updating	Section 9	EMS Standard 4.4 Document and Record Manageme		
7.5.3 - Control of Documented Information	Section 9	EMS Standard 4.4 Document and Record Manageme		
8 - Operations	1			
8.1 - Operational Planning and Control	Section 5.1	 EMS Element 5 Operation EMS Standard 5.1 Planning & Design of Infrastructure EMS Standard 5.2 Operational Contract Tender Mgt EMS Standard 5.3 Maintenance EMS Standard 5.4 Network Operation (in progress) EMS Standard 5.5 Facility Ops – Waste to Energy EMS Standard 5.6 Trade Waste RW& Backflow 		
8.2 - Emergency Preparation & Response	Section 5.2	 EMS Standard 5.7 Emergency Preparedness & Response EMS Standard 7.1 Incident Management & Reporting 		
9 - Performance Evaluation				
9.1 - Monitoring, measurement and	evaluation			
9.1.1 - General	Section 6.1.1.Section 6.1.2	 EMS Element 6 Performance Evaluation EMS Standard 6.1 Monitoring Measurement and Evaluation 		
9.1.2 - Evaluation of Compliance	Section 6.1.3	 EMS Element 6 Performance Evaluation EMS Standard 6.2 Auditing systems and compliance 		



AS/NZS ISO 14001:2015 Requirement	EMS Manual Reference	Environmental Framework Reference
9.2 - Internal Audits		
9.2.1 - General	• Section 6.1.3	 EMS Element 6 Performance Evaluation EMS Standard 6.2 Auditing systems and compliance
9.2.2 - Internal audit program	 Section 6.1.3 Section 6.2 	 EMS Element 6 Performance Evaluation EMS Standard 6.2 Auditing systems and compliance
9.3 - Management Reviews		
9.3. Management Review	Section 6.2	 EMS Element 3 Planning EMS Standard 3.3 Objectives, Targets and Plans EMS Element 6 Performance Evaluation EMS Standard 6.2 Auditing – Systems and Compliance EMS Element 7 Improvement EMS Standard 7.1 Incident Management. EMS Standard 7.2 Management Review and Outputs
10 - Improvement		
10.1 - General	Section 7	EMS Element 7 ImprovementEMS Standard 6.2 Auditing
10.2 - Nonconformity and corrective action.	Section 7	 EMS Element 7 Improvement EMS Standard 6.2 Auditing systems and compliance EMS Standard 7.1 Incident Management and Reporting
10.3 - Continual Improvement	Section 7	 EMS Element 7 Improvement EMS Standard 6.2 Auditing systems and compliance EMS Standard 7.1 Incident Management and Reporting EMS Standard 7.2 Management Review and Outputs



12. Document History

Date	Name	Description
August 2010	Danielle Cromwell	Original document
September 2010	Danielle Cromwell	 4.5.1 Monitoring and Measurement – put heading "STP Discharge (STP Operations Team)" in correct position 4.3.2 Deleted separate requirements for contractors and annual review of register by Divisional Managers
October 2011	Adam Ross	4.5.3 Inclusion of Operational Non - Conformities
November 2011	Adam Ross	 4.5.1 Monitoring and Measurement – adjusted STP discharge section to include Mechanical and Electrical maintenance of calibration records
February 2012	Adam Ross	 4.4.7 Emergency Preparedness and Response – reference to ICAM (Incident Cause Analysis Method) Form and Work Instruction included.
December 2012	Adam Ross	4.4.2 Reference to divisional training matrixes added.
April 2014	Adam Ross	Removed reference to ETM and added references to The Source
January 2015	Rita Narangala	• Various. Updated with outcomes of IRM internal audit. Including EMS diagram, definition of Significant Risk.
February 2016	Kristen Knight	Updated in accordance with ISO14001:2015
August 2017	Belinda Reynolds	Updated in accordance with ISO14001:2015 Gap analysis
September 2020	Leisa Brough	 Updated in accordance with ISO14001:2015 and new environmental Legislation. Made extensive improvements to assist the whole company utilising. Updated to align with 2030 strategy, updated links to corporate references. Aligned to 45001 framework
May 2021	Leisa	 Updated references from inherent to residual risks (significant environmental aspects) Updated references of SHEQ to IMS