

**Guidelines for  
Implementing Total Management Planning**

**Environmental Sustainability**

**OVERVIEW**

|



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## LIST OF ACRONYMS

DERM	Department of Environment and Resource Management
EMP	environmental management program
EP Act	<i>Environmental Protection Act 1994</i>
EPP (Water)	Environmental Protection (Water) Policy 2009
ERAs	environmentally relevant activities
ESD	ecologically sustainable development
IEMS	integrated environmental management system
TMP	Total Management Plan
WSPs	Water Service Providers

## 1 INTRODUCTION

This guide, relating to the key result area of environmental sustainability, aims to equip Queensland's water service providers (WSPs) with tools to ensure they meet their environmental responsibilities. These responsibilities should be aligned with ecologically sustainable development (ESD) principles in their service strategies relating to water supply and sewerage.

## 2 APPLICATION

This key result area is applicable to all WSPs as defined in the *Water Supply (Safety and Reliability) Act 2008*. Essentially these WSPs include the following categories:

- local governments;
- joint local governments;
- Aboriginal community councils;
- Torres Strait Island community councils;
- SunWater;
- urban water supply boards; and
- rural water supply boards;

## 3 PURPOSE

This Overview is aimed especially at elected representatives, board members and senior management of WSPs. It is intended to provide them with an overall understanding of environmental sustainability, to enable WSPs to coordinate and systematically address environmental issues relating to their water supply and sewerage activities.

The Overview is supported by an Implementation Guide, which provides detailed guidance for WSP practitioners and their consultants.

## 4 WHAT IS ENVIRONMENTAL SUSTAINABILITY?

Environmental sustainability is a balance between:

- protection of ecological and natural systems;
- protection and conservation of places of cultural heritage significance, both on land and in submerged areas;
- economic development; and
- maintenance of cultural, economic, physical and social wellbeing of people and communities.

The requirement to achieve environmental sustainability is determined mostly by statutory obligations under State legislation and policy, and increasingly by the internal policies of the organisation.

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## 5 ENVIRONMENTAL ISSUES FACED BY WSPs

Every stage of manipulating the water cycle to provide water supply and sewerage services involves some potential for environmental impact. These impacts are usually detrimental rather than beneficial, in which case the statutory term ‘environmental harm’ is more appropriate. This term is defined in the *Environmental Protection Act 1994*:

‘environmental harm’ is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance.

Environmental issues being faced by many WSPs include:

- heightened community expectations in respect of environmental responsibility;
- the trend towards technology-based effluent standards;
- increased application of the ‘precautionary principle’ in regulating contaminant releases (e.g. nutrient limitations);
- more onerous regulatory requirements (e.g. the need for environmental plans under the Environmental Protection (Water) Policy 2009 - EPP(Water));
- greater emphasis on water use efficiency, environmental flows and irrigation sustainability; and
- increased pressure for sustainable resource reuse.

Some of the more significant environmental issues which involve some potential for environmental harm are shown in Appendix A. These issues may need to be addressed at various stages in the sequence from raw water abstraction to effluent reuse or disposal.

## 6 WHY DO WE NEED TO CONSIDER ENVIRONMENTAL SUSTAINABILITY?

The goal of environmental sustainability is to protect the environment by conducting WSPs’ operations in compliance with the principles of ESD. The National Strategy for Ecologically Sustainable Development defines ESD as:

using, conserving and enhancing the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.

The core objectives of the Strategy are:

- to enhance individual and community wellbeing and welfare by following a path of economic development that safeguards the welfare of future generations;
- to provide for equity within and between generations; and
- to protect biological diversity and maintain essential ecological processes and life support systems.

Source: National Strategy for Ecologically Sustainable Development, 1992

## 7 BENEFITS OF ENVIRONMENTAL SUSTAINABILITY

For WSPs in general, the following benefits can be expected to occur over time:

**For customers**, environmental sustainability:

- minimises environmental impacts (e.g. offensive odours and excessive noise) within the community;
- protects public health; and
- improves community involvement and awareness of environmental issues.

**For the organisation**, environmental sustainability:

- minimises environmental impacts on land, water and air;
- maximises beneficial reuse of treatment plant by-products;
- complies with all statutory obligations; and
- recognises the potential health risks.

WSPs' corporate plans and environmental policies frequently incorporate goals such as:

- achieving local long-term ESD; and
- pursuing continual improvement towards this end.

Compliance with minimum statutory obligations across WSPs' operational activities will go a long way towards achieving ESD, but to adopt an approach of continual improvement towards ESD, a WSP needs to support the concept where sustainability underpins all policies and operational procedures. This applies not only in providing water supply and sewerage services, but in all activities that have an impact on the environment.

It is therefore suggested that all water supply and sewerage activities be conducted with a focus on achieving the long-term goal of environmental sustainability. Each WSP must decide how this goal should be interpreted locally and translated into appropriate achievable objectives and actions.

## **8 STATUTORY OBLIGATIONS**

The *Environmental Protection Act 1994* is designed to protect Queensland's environment through an integrated management program that is consistent with ESD. The integrated management program places significant emphasis on promoting environmental responsibility and involvement within the community.

The Environmental Protection (Water) Policy 2009 supports the EP Act in implementing the integrated management program, and helps to manage activities that could adversely affect Queensland's waters.

The EPP (Water) addresses the two types of activities recognised in the EP Act, namely:

- environmentally relevant activities (ERAs), which require a regulatory authority; and
- any (other) activities that could cause environmental harm, but which require no specific authority.

The legislation encourages individuals within organisations, and the community in general, to practise what has become known as 'due diligence' in meeting their obligations under the legislation.

WSPs' water supply and sewerage services involve both types of activities mentioned above. In this context, ERAs include water and sewage treatment, and certain effluent and sludge disposal activities. These activities are regulated under the EP Act and Regulation. Particular provisions of the EP Act and Regulation relate to the need for an environmental management program (EMP) or integrated environmental management system (IEMS) for all such ERAs.

Other activities that are not regulated in this way, but which could cause environmental harm, are addressed in the EPP (Water). Part 7 of the EPP (Water) sets out general obligations of local governments and DERM with regard to the preparation of environmental plans covering certain water supply and sewerage activities with potential to cause environmental harm. These activities are:

**For local governments:**

- sewage management (s. 40);
- trade waste management (s. 41); and
- water conservation (s. 43).

**For DERM:**

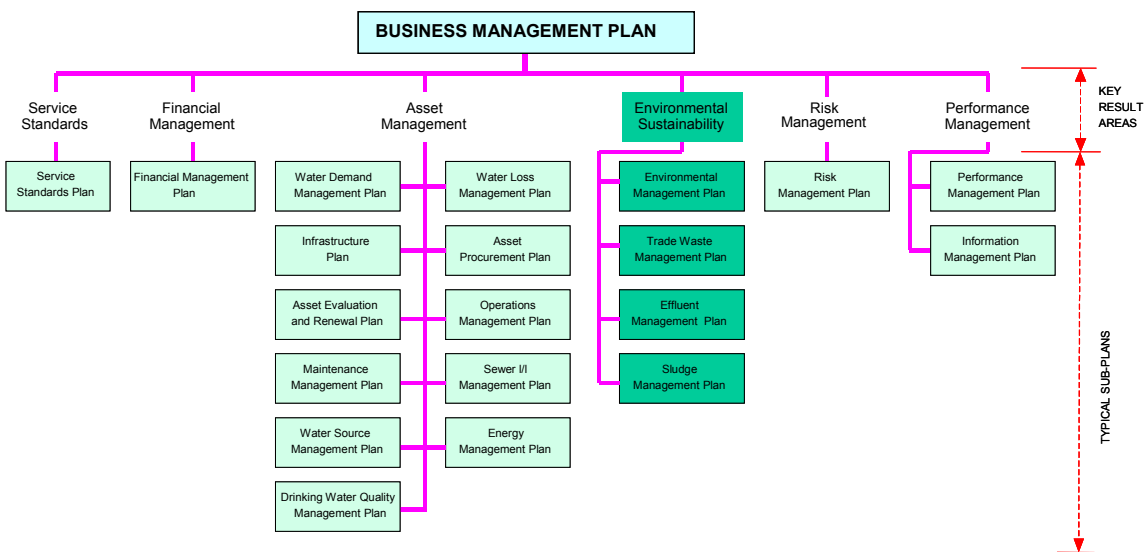
- making environmental water provisions (s. 44); and
- protecting ground waters (s. 45);

**9 ENVIRONMENTAL SUSTAINABILITY WITHIN A TOTAL MANAGEMENT PLANNING CONTEXT**

Figure 1 illustrates how environmental sustainability fits within a typical total management planning framework. Here it is considered as a key result area covering the following:

- environmental management;
- trade waste management;
- effluent management; and
- sludge management.

A full Environmental Sustainability Plan should consider all these issues. Within the TMP each of the above issues could be considered under individual sub-plans.



**FIGURE 1: Environmental sustainability in the TMP context**

**9.1 Coordinating environmental sustainability issues**

The TMP Development Guide recommends that a TMP coordinator be allocated, to:

- keep the TMP up-to-date;
- disseminate information generated through implementing the TMP to staff; and
- coordinate the review and updating of action plans.

WSPs may allocate responsibility for the environmental sustainability component of the TMP to a specific coordinator who would report to the TMP coordinator.

## 9.2 Implementing processes to ensure environmental sustainability

It is desirable that environmental sustainability is addressed within the TMP context, as discussed in the TMP Development Guide. This involves:

- monitoring implementation of performance;
- ensuring the allocation of resources; and
- periodic review and updating of action plans.

## 9.3 Maintaining environmental sustainability

Guidance on maintaining environmental sustainability is discussed in the TMP Development Guide. It involves reviewing and updating:

- action plans (6- to 12-monthly);
- sub-plans (1- to 3-yearly);
- policies (1- to 5-yearly); and
- Business Management Plan (1- to 3-yearly).

## 9.4 Format of environmental sustainability planning

The following sub-plans are suggested:

- Environmental Management Plan (includes Environmental Plans under EPP (Water));
- Trade Waste Management Plan;
- Effluent Management Plan; and
- Sludge Management Plan.

These combined sub-plans can be considered as a full Environmental Sustainability Plan. The suggested content of these sub-plans is summarised in the Environmental Sustainability Implementation Guide, but a range of formats is acceptable.

## REFERENCES AND FURTHER READING

*National Strategy for Ecologically Sustainable Development*, Australian Government Publishing Service, Canberra, 1992.

## APPENDIX A: Environmental issues

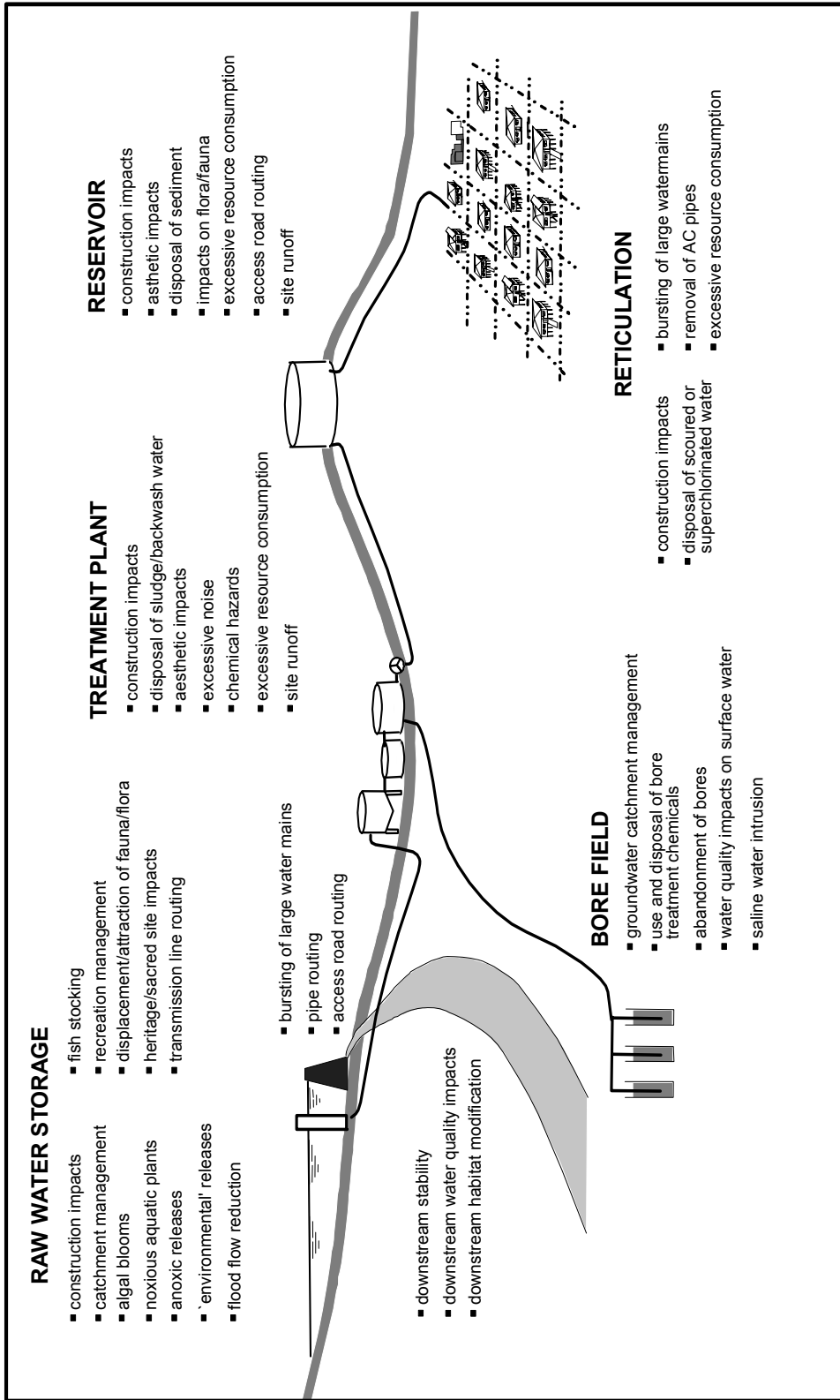


FIGURE A1: Environmental issues for water supply schemes

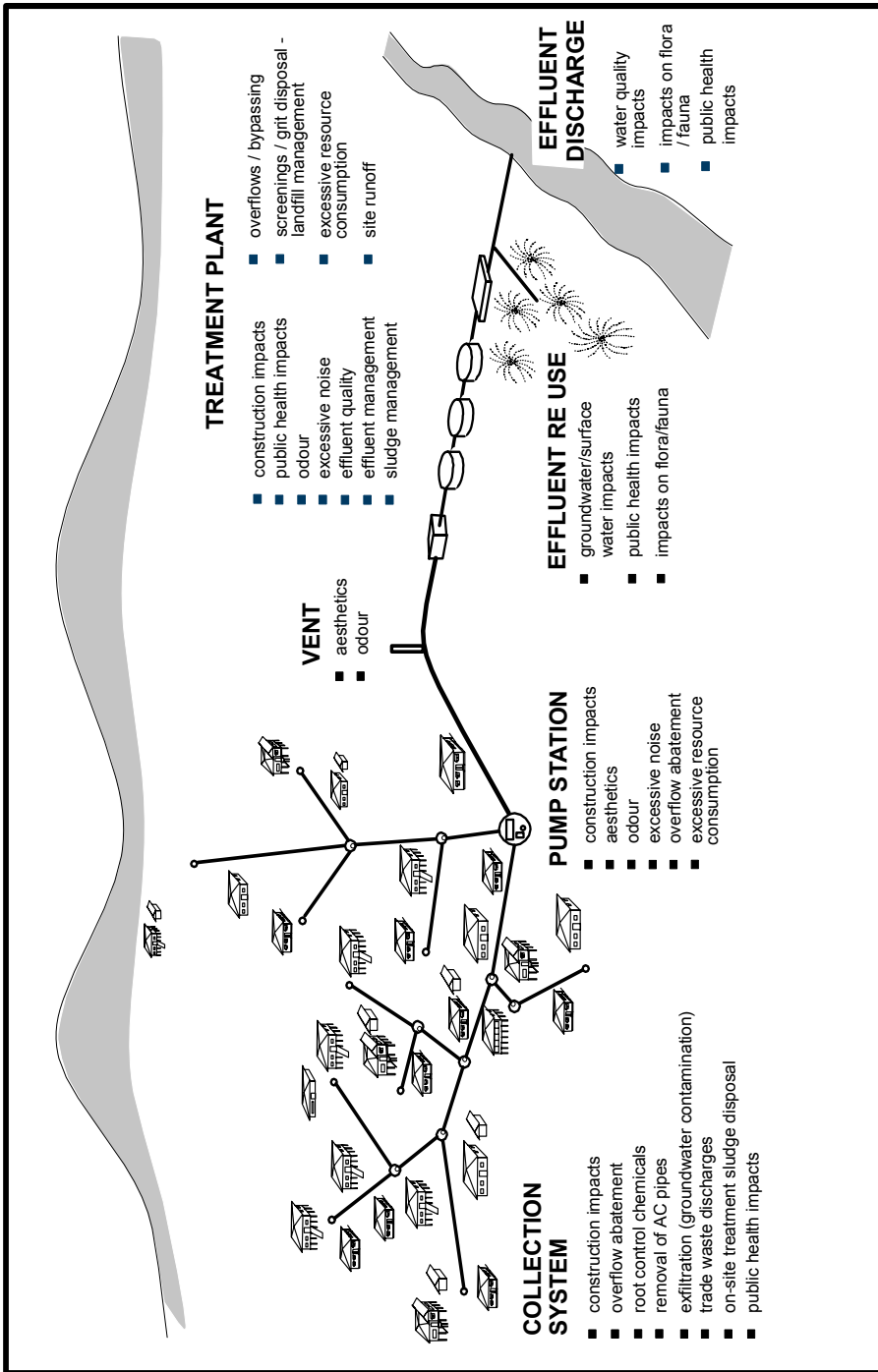


Figure A2: Environmental issues for sewerage schemes