

**Guidelines for  
Implementing Total Management Planning**

**Risk Management**

**OVERVIEW**



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## **LIST OF ACRONYMS**

DERM	Department of Environment and Resource Management
TMP	Total Management Plan
WSP	Water Service Provider

## **1 INTRODUCTION**

This Overview and the accompanying Implementation Guide, relating to the key result area of Risk Management, aim to help Queensland's Water Service Provider (WSP) organisations integrate risk management into the total management planning of water supply and sewerage services. All significant risks in delivering services will then be able to be identified and cost-effectively addressed.

These guides are compatible with the *Water Supply (Safety and Reliability) Act 2008*, which regulates the activities of Queensland WSPs. They are applicable to all WSPs as defined in the Water Supply Act. Essentially this includes the following categories:

- rural water supply boards;
- urban water supply boards;
- State government departments or other entities;
- local governments;
- joint local governments;
- Aboriginal community councils;
- Torres Strait Island community councils; and
- Non-government entities.

This Overview is aimed especially at elected representatives, board members and senior management of WSPs, and is intended to:

- establish the importance and central principles of risk management;
- highlight the role of managers in risk management; and
- demonstrate in principle how risk management can be integrated into total management planning.

The Risk Management Implementation Guide deals with the risk management process in more detail, and with integrating risk management into total management planning.

## **2 WHAT IS RISK MANAGEMENT?**

Risk management is as much about identifying opportunities as avoiding or mitigating losses.

It is a logical and systematic process of establishing the context, identifying, analysing, evaluating, treating, monitoring and communicating risks associated with any activity, function or process, in a way that enables an organisation to minimise losses and maximise opportunities.

## **3 THE IMPORTANCE OF RISK MANAGEMENT**

### **3.1 Industry trends**

The drive for increased efficiency in the water industry has tended to force WSPs into taking a less conservative but more risky approach to service delivery.

Features of ongoing business reform have provided a broad administrative framework for further improvements to occur. These include more stringent corporate governance requirements, increased devolution of managerial discretion, organisational downsizing, contracting-out of services, greater flexibility and a focus on results and accountability.

In this general environment of continual change and limited resources, the management of risk has become a critical issue. Decision-makers thus need to know about possible outcomes and take steps to control their impact.

Risk management is already widely recognised as an integral part of good management practice. To be most effective, however, risk management should also become part of an organisation's culture, by being integrated into its philosophy, practices and business plans rather than viewed or practised as a separate program. When this is achieved, risk management becomes the business of everyone in the organisation.

### **3.2 Consequences of not managing risk**

Failure to manage risk effectively can lead to such adverse consequences as:

- financial losses by the organisation;
- personal injury;
- community losses;
- loss of professional or technical standing;
- criminal charges;
- environmental damage;
- public health crises; and
- claims for damages.

This is not to say that risk management is about avoiding risk completely. It is more about knowing what the relative severity of the consequences is likely to be for each level of management response, and making management decisions accordingly.

While the above highlights the adverse consequences of not managing risk, it should be recognised also that not managing risk can result in significant opportunities being foregone by the organisation, as discussed in Section 3.3.

### **3.3 Opportunities arising from risk management**

Many risk analyses are directed towards the negative consequences of risks, with the evaluation of consequences reflecting only the losses or undesired outcomes that might arise. However, the risk management approach can also be used to identify and prioritise opportunities ('positive' risks), with little change to the process.

'Positive' risk analysis involves identifying:

- any associated positive consequences (i.e. opportunities/benefits) that would offset the negative consequences of particular events, as identified in a traditional risk analysis; and/or
- the opportunities/benefits that could arise from a set of events selected solely on the basis of their potential for positive outcomes.

This approach is demonstrated in principle in Reference 2.

These guidelines concentrate on the traditional approach of managing risks with predominantly adverse consequences, but WSP managers are encouraged also to apply risk management principles to identify significant opportunities for improving service delivery.

## **4 PRINCIPLES OF RISK MANAGEMENT**

### **4.1 Elements of risk**

The three basic elements of risk are:

- an event;
- the likelihood of the event; and
- the consequences of the event.

For a particular event, likelihood and consequence may be combined to produce a level of risk, expressed either qualitatively or quantitatively.

## 4.2 Definitions

The following definitions are taken from the current Australian Standard on risk management, AS/NZS 4360 — 1999 (Reference 1).

### **Risk:**

The chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood.

### **Event:**

An incident or situation that occurs in a particular place during a particular interval of time.

### **Likelihood:**

A qualitative description of probability or frequency.

### **Consequence:**

The outcome of an event expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain. There may be a range of possible outcomes associated with an event.

### **Risk treatment:**

Selection and implementation of appropriate options for dealing with risk.

## 4.3 Characterisation of risks

In characterising risks it is necessary to distinguish between **sources** of risk and the **causes** of risk events.

Potential risk events within a WSP organisation can be associated with a wide range of source categories, including:

- political;
- regulatory;
- customers;
- environmental;
- economic;
- commercial/strategic;
- financial;
- public health/safety;
- infrastructure planning/design;
- procurement/contractual;
- construction, operation and maintenance;
- asset failure;
- support service failure;
- security of assets;
- litigational;
- organisational; and
- natural events.

It is important to recognise that, while superficially some events might appear to be caused by material or system failure, ultimately all risk events arise as a result of human nature or behaviour at some stage in the preceding chain of events. Examples include:

- human error;
- insufficient or limited knowledge;
- failure to properly manage knowledge;
- inadequate experience;
- changes in community perceptions as to the importance of particular issues; and
- uncertainty about the future (e.g. natural events).

Some examples of risks common to many organisations, including those of WSPs, are listed below:

- failure to recognise and take advantage of opportunities;
- failure of a project to reach its objectives;
- failure of physical infrastructure, equipment etc.;
- customer dissatisfaction;
- unfavourable publicity;
- a threat to physical safety;
- a breach of security;
- mismanagement;
- a breach of legal or contractual responsibility;
- fraud; and
- deficiencies in financial controls and reporting.

#### **4.4 Assessing risks**

The cornerstone of risk management for any organisation is the assessment of identified risks. This involves:

- determining likelihood and consequences;
- estimating level of risk; and
- evaluating and prioritising the risk.

#### **4.5 Treating risks**

A risk treatment strategy is a way of addressing a risk by:

- reducing its level of risk to what is acceptable, or below;
- transferring or avoiding the risk; or
- accepting it.

This implies the definition of one or more criteria for designating acceptable levels of risk.

In principle, such a strategy will involve implementing risk reduction control measures through one or more once-off management initiatives or ongoing operational procedures. It will be executed at whatever management level is appropriate.

Risk management needs to be seen as an integral part of running an organisation, not as some expendable 'add-on'. Risk treatment strategies should be a part of the applicable management initiatives and operational procedures. This is further discussed in Section 7 regarding the role of management in risk management.

## 4.6 Need for a risk management policy

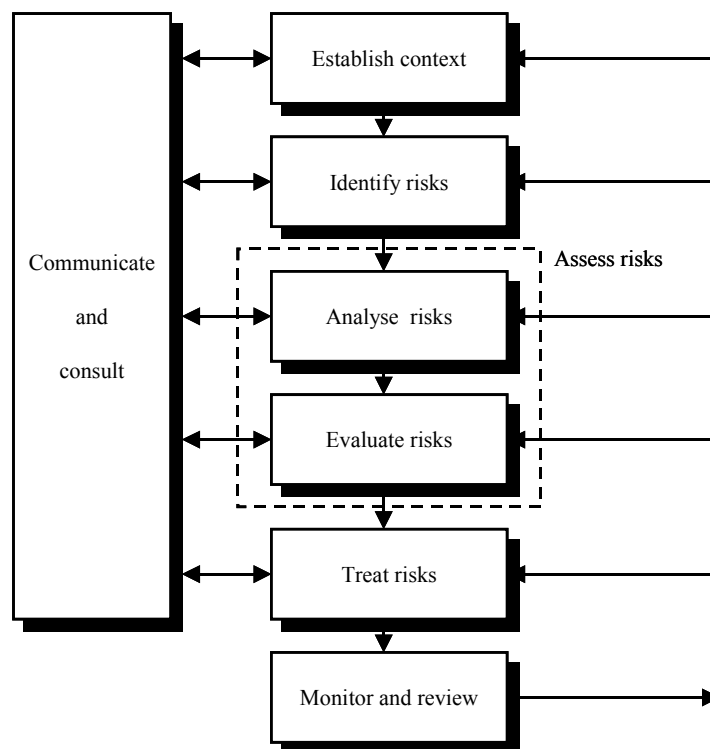
It may not be necessary or desirable for a WSP to have a separate risk management policy document. However, the WSP's management policies or strategies should contain the following risk management components:

- the objectives and rationale for managing risk;
- how this links to the organisation's strategic/corporate plan;
- the extent or range of risks that need to be managed;
- guidance on what may be regarded as acceptable risk;
- the level of documentation required;
- staff positions responsible for managing risk;
- sources of support/expertise available to assist those responsible for managing risk; and
- principles for reviewing organisational performance in regard to the management of risk.

## 5 THE RISK MANAGEMENT PROCESS

Detailed recommendations for managing risk in any organisation are contained in the current Australian Standard AS/NZS 4360-1999 (Reference 1).

The generalised risk management process is shown in summary form in Figure 1, based on the Standard.



**FIGURE 1: Summary of the risk management process (Adapted from Figure 3.1, Reference 1)**

For WSPs, the risks that arise will normally be within the WSP's jurisdiction, but a range of cross-boundary risks will need to be taken into account. These arise from constraints and interactions in respect of stakeholders external to the WSP, for example:

- customers;
- the general public;
- regulators;
- the media;
- goods and services providers; and
- trade unions.

As Figure 1 shows, communication and consultation needs to occur at all stages of the process, and should involve external stakeholders in addition to a cross-section of staff within the organisation.

The risk management process can be applied at any time, but especially at times of significant organisational, operational or external change. Some such changes are listed in Table 1, with examples of key risk management issues that would need consideration.

A WSP should not, however, wait until some significant change eventuates before applying risk management.

**TABLE 1: Application of the risk management process**

Type of change	Some key risk management issues to be considered
Development and implementation of TMP	<ul style="list-style-type: none"> <li>▪ Integration of risk treatment strategies with TMP</li> <li>▪ Ensuring effective TMP implementation</li> </ul>
Changing WSP's strategic direction	<ul style="list-style-type: none"> <li>▪ Achievement of goals and objectives</li> <li>▪ Maintaining validity and relevance of TMP</li> <li>▪ Maintaining service standards and delivery</li> </ul>
Changing WSP functions and/or operations	<ul style="list-style-type: none"> <li>▪ Integrity of assets</li> <li>▪ Maintaining capital investment</li> <li>▪ Maintaining service standards and delivery</li> <li>▪ Meeting legal obligations</li> <li>▪ Maintaining financial performance</li> </ul>
Organisational reform/restructure	<ul style="list-style-type: none"> <li>▪ Maintaining knowledge base</li> <li>▪ Maintaining human and support resources</li> <li>▪ Workplace health and safety</li> </ul>
Entering into contracts/agreements	<ul style="list-style-type: none"> <li>▪ Definition of roles/responsibilities/accountabilities</li> <li>▪ Optimising tender/procurement processes</li> <li>▪ Adequacy of contract/agreement documentation</li> <li>▪ Assessment of tenderers</li> </ul>
Changes in community perceptions/expectations	<ul style="list-style-type: none"> <li>▪ Relevance of service standards</li> <li>▪ Level of service charges</li> <li>▪ Significance of cross-subsidies</li> <li>▪ Environmental standards</li> </ul>

The different phases in the process are discussed in more detail in the Risk Management Implementation Guide, and in References 1 and 2.

## **6 RISK MANAGEMENT AND TOTAL MANAGEMENT PLANNING**

### **6.1 Relevance to maintaining service standards**

As pointed out in the Service Standards Implementation Guide, the service standards that any WSP adopts should be regarded as the organisation's primary service delivery objectives, towards which all strategic and operational planning is directed. Service standards are thus central to total management planning.

The traditional risk management practices of WSPs, whether or not they are recognised as such or form part of a formalised risk management program, are ultimately aimed at ensuring the delivery of services and maintaining adopted service standards. Thus risk management itself must also be regarded as central to total management planning.

## 6.2 Risk management within a TMP

Any WSP preparing a TMP should concurrently apply the risk management process, whether for the first time or to review existing risk management, in a way that is appropriate to the organisation, its functions and its context. Integration of risk treatment strategies into the TMP is a key issue to consider.

A risk management plan should be formulated so as to ensure that either:

- existing risk treatment strategies are reviewed and, as appropriate, implemented as part of the TMP; or
- a program of prioritised risk reduction control measures is developed as part of the TMP development process and implemented with the TMP.

It is important to include the control measures within each relevant TMP sub-plan, to ensure that they are incorporated in the respective action plans. This is in addition to any summary of risk treatment strategies and risk reduction control measures that may have been developed as part of risk management planning.

## 6.3 Integrating the risk management process with TMP development

The identification and assessment of risks, as indicated in Figure 1, will need to be carried out as part of Phase 2 of the TMP development process (collating and analysing information), as described in Section 5.4 of the Total Management Plan Development Guide. This is discussed in more detail in the Risk Management Implementation Guide.

## 7 CORPORATE RESPONSIBILITY FOR RISK MANAGEMENT

For risk management to be effective within an organisation it needs to be promoted by the organisation at all levels and integrated into the culture and day-to-day operations of the organisation.

HB 142 — 1999 (Reference 2), section titled ‘Implementing a corporate program for managing risks’, highlights this aspect of risk management. Mechanisms for managing risk should be important components of every organisation’s philosophies, goals and accepted practices and they should be reflected in its business plans and training programs.

Organisational culture is likely to be a severe impediment to the implementation of risk management programs and senior managers will need to be aware of this and introduce measures to change the culture where and when necessary. Typical measures that could be applied include:

- Empowering managers at all levels to manage risks;
- Acknowledging, rewarding and publicising effective risk management practices;
- Providing opportunities for staff to discuss options for avoiding the recurrence of problems;
- Focussing on positive results rather than minor negative ones;
- Fostering learning from both positive and negative results, including unexpected or untoward ones; and
- Avoiding the re0introduction of restrictive controls.

## REFERENCES

1. AS/NZS 4360 — 1999 : Australian Standard on Risk Management, Standards Association of Australia, Sydney, 1999.
2. HB 142 — 1999: A Basic Introduction to Managing Risk Using the Australian and New Zealand Risk Management Standard AS/NZS 4360 — 1999, Standards Association of Australia, Sydney, 1999.