

Guidelines for Preparing Strategic Asset Management Plans

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The Director, Product Marketing
Locked Bag 40
Coorparoo Delivery Centre Q 4151

Copies of this publication are available from:

Director,
Water Industry Asset Management and Standards
GPO Box 2454
Brisbane Q 4000

Phone: +61 7 3224 8762
Fax: +61 7 3224 7999
Web site: www.nrm.qld.gov.au

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1 Introduction

The *Water Act 2000* (“the Act”) was created on 13 September 2000 and has replaced certain provisions of the *Water Resources Act 1989*. The Act can be accessed on the Internet at <http://www.legislation.qld.gov.au>

Chapter 3 of the Act (“Infrastructure and Service”) establishes a new regulatory regime covering the provision of water and sewerage services. It applies to both public and private providers of services and is based on a system of registration of service providers (Chapter 3, Part 2, Division 1 - “Registration of Service Providers”).

Part 3 of Chapter 3 (“Service Provider Obligations”) requires service providers to take certain actions designed to ensure continuity of the services they supply to customers. This includes a requirement for service providers to prepare a **Strategic Asset Management Plan (SAMP)** which documents service standards (set by the service provider) as well as an operations, maintenance and renewals strategy for achieving these standards.

A SAMP must be prepared in accordance with the Act and these guidelines (**Guidelines for Preparing Strategic Asset Management Plans**, NR&M February 2002) and be approved by the regulator. A service provider must comply with an approved SAMP when supplying services to customers.

The regulator may exempt small service providers¹ from preparing a SAMP (s435).

Currently the “regulator” is the chief executive of the Department of Natural Resources & Mines (NR&M).

1.1 Guideline - aims

These Guidelines detail the minimum requirements for preparing a Strategic Asset Management Plan. Service providers may choose at their own discretion to go beyond these requirements.

These Guidelines do not attempt to outline “best practice” asset management for water and sewerage services. Nor do they prescribe the methodology that service providers should use in determining matters such as level of service standards and operation, maintenance and renewal strategies. These are issues for the service provider to determine at their own discretion and will differ between providers depending on size, nature of the service, and the complexity of the system. Relevant considerations may include - customer expectation, needs and preferences; infrastructure capability; budgetary constraints and cost of service delivery; demand profile; business/corporate/political objectives; and the requirements of other regulators.

Other guidelines currently exist within industry which describe “best practice” in relation to these issues, for example, the Total Management Planning Guidelines issued by the Department of Natural Resources & Mines.

¹ Schedule 4 of the *Water Resources Act 2000* defines large, medium and small service providers.

The Guidelines are structured to reflect the three key components of the SAMP regulatory requirement:

***Preparation of the SAMP
(Section 2)***

- overview of the Act requirements - what is a SAMP, who must prepare one, what services does it relate to and the timing for submission
- key components of a SAMP and details of what must be documented

Approval by the regulator (Section 3)

- the process for approval; grounds for rejection; appeal rights of the service provider; changing the SAMP after approval

***Annual reports, regular reviews and audits
(Section 4)***

- requirements for annual reports, reviews and audits; regulator's powers to undertake a spot audit; and outcomes and actions following these processes

1.2 Application of the Guidelines

The service provider regulatory regime represents “new territory” for both service providers and the regulator. In preparing these Guidelines, the regulator has given careful consideration to the practicability and feasibility of compliance, particularly in the short term. Please note that:

- *Some “tailoring” of the Guidelines has been necessary for their application to irrigation services reflecting difference in the nature of service provision (Section 2.6.2).*
- *Some requirements will be mandatory from 1 October 2007.* This relates to the requirement to set level of service standards for particular performance indicators and set differential level of service standards in certain situations (Section 2.6.4) and Appendix 1.
- *These Guidelines will be reviewed during the next 5 years* (before the commencement of the 1 October 2007 requirements) to ensure that they are appropriate for the purposes of the regulatory regime. The review will include:
 - consideration of outcomes from the first round of SAMPs (and the Customer Service Standards (CSS)²);
 - annual reports;
 - reviews;
 - an assessment of evolving industry developments.

Any proposed modifications will be considered in a full consultation process.

1.3 Linkages with other requirements

1.3.1 Customer Service Standards (CSS)

SAMPs are the primary way of documenting the actions needed to ensure continuity of supply of services to customers. They do not, of themselves, ensure customers are fully informed as to the service they are receiving. This objective is achieved through the requirement to have a CSS in those cases where customers do not have a contract with their service provider³.

SAMP and CSS requirements are inter-related. CSS essentially inform customers who do not have contracts with their service provider of the level of service standards that have been identified and which the SAMP strategy is designed to deliver. Thus, CSS reflect the level of service as outlined in the SAMP and how customers will relate to the service provider for processes such as billing, metering, complaints, and consultation. Any subsequent changes in the standards outlined in the SAMP need to be appropriately reflected in the CSS.

Existing CSS (and contractual obligations) are useful for determining appropriate level of service standards in a SAMP by taking into account the provider's contractual obligations and what they have previously told their customers they can expect. Any subsequent change to the level of service standards detailed in a CSS through consultation or renegotiation needs to be appropriately reflected in the SAMP.

1.3.2 Exemptions

Small service providers are eligible to apply to the regulator for an exemption from all or part of the SAMP requirements (s434). Where the regulator grants an exemption, which relates to the level of service standards of the SAMP requirement, an exemption will generally be granted for the level of service standard component of the CSS.

1.3.3 Total Management Plans (TMPs)

Section 2 outlines the information and details what service providers will need to include in their SAMP in order to comply with these Guidelines and the Act.

Many service providers may already have all or part of this information contained within existing documentation or as part of another plan (eg. a Total Management Plan). Where these circumstances exist, the service provider is **not** required to extract or "re-package" the information into a new SAMP document. Such existing documentation may, as a whole, be forwarded directly to the regulator - this will apply **provided** that:

- the entire documentation submitted addresses *all* issues required by the Act and these Guidelines. Where existing documentation addresses only *part* of the SAMP requirements, additional documentation will need to be submitted to fulfil outstanding requirements;
- the documentation *clearly* identifies the information which is intended to address SAMP requirements;
- the registered professional engineer who certifies the SAMP also certifies the relevant information contained in the existing documentation.

³ The Act actually states that CSS are only required where the service provider does not have "a supply contract" with all of its customers. However, it is intended to amend the Act so that CSS are only required where the service provider does not have a "contract for the supply of registered services" with all of its customers.

1.3.4 "Dual-purpose" Total Management Plans (TMPs)

There may be instances where a service provider wishes to prepare and submit a Total Management Plan (TMP) to NR&M to obtain:

- maximum capital works subsidies provided by the Department of Local Government and Planning (DLGP). Total Management Plans (TMPs) must be submitted to and approved by NR&M before receiving the maximum subsidy from DLGP;
- the regulator's approval for a SAMP.

These two approval processes are quite separate.

Submission of a:

- TMP for subsidy purposes is a voluntary undertaking and involves an administrative approval, with a recommendation made to DLGP;
- SAMP is a mandatory requirement involving regulatory approval, with penalties for non-compliance and with certain appeal rights for service providers.

Where a dual purpose exists, service providers may choose to submit the TMP in a single submission. This will apply *provided* that:

- the TMP has been prepared in accordance with the most recent version of the NR&M *Guidelines for Total Management Planning* (December 2001);
- the covering letter *clearly* states that the TMP is submitted for two purposes:
 - to satisfy DLGP's Local Governing Bodies' Capital Works Subsidy Scheme guidelines requiring NR&M approval of a TMP to obtain maximum subsidies;
 - to satisfy the requirements of the *Water Act 2000*, which requires that a SAMP be submitted for approval by the regulator;
- the submission:
 - *clearly* identifies all parts of the TMP that constitute the service provider's SAMP;
 - include a certification by a registered professional engineer for those parts of the TMP that constitute a SAMP.

2 Preparing a SAMP

2.1 Who must have a SAMP?

Unless exempted, each person or entity registered under the Act as a service provider is required to have an approved SAMP for the registered services they provide.

A “service provider” is the **owner** of the infrastructure providing the service, not the operator of the infrastructure. It is therefore the owner of the infrastructure who is responsible for preparing a SAMP.

2.2 What is a SAMP?

A SAMP is a document prepared by a service provider that contains the following:

- **Service and system overview** - a general description of the registered services to which the plan applies and the infrastructure for supplying the service/s.
- **Standards for appropriate levels of service and performance indicators for the service** - service providers are required to set quantitative standards for a minimum range of indicators relating to both what customers experience of the service and system-performance in delivering that service. Service providers must also outline the methodology used for setting service standards.
- **An operations, maintenance and renewals strategy (OM&R)** - the strategy must demonstrate how each of the above standards will be achieved.
- **Proposed arrangements for financing implementation of the SAMP** - includes estimated and projected expenditure for OM&R.

When preparing a SAMP, service providers are required to:

- have regard to best practice industry standards; and
- prepare the SAMP in accordance with these guidelines.

Note: A requirement of these guidelines is to address certain components of the plan over a 10 year time period.

The SAMP must be certified by a registered professional engineer and be submitted to the regulator for approval.

2.3 To which services must a SAMP apply?

A SAMP must be prepared for **each** of the service provider’s registered services. A **registered service** is a “water service” or “sewerage service” for which the person/entity is a registered service provider.

Many service providers will supply **more than one registered service** (i.e. both “water” and “sewerage” services). In these circumstances, a combined SAMP that addresses all services provided may be prepared.

2.3.1 Different schemes

A “water” and/or a “sewerage” service is taken to be the **whole** service and need **not** be separated into part, individual or stand alone schemes. For example, a service provider for a registered “sewerage” service may actually have three separate sewerage schemes serving three towns. In this case, all that is required is a single SAMP for the provision of the “sewerage” service as a whole. However, any significant differences between schemes, or the OM&R strategies used for these schemes, must be noted in the SAMP. A service provider can also decide to prepare different SAMPs for different schemes, if it wants to.

2.3.2 Different types of water services

A service provider may supply more than one “type” of water service eg:

- bulk water - sale of water in large quantities, other than for irrigation;
- retail water - reticulated service in a defined service area (other than bulk water, irrigation, or recycled water);
- irrigation - supply of water or drainage services for irrigation of crops or pastures (for commercial gain);
- supply of water for stock and domestic services.

A SAMP is concerned with the water service **as a whole** regardless of the different “types” of water services supplied. However, where there are substantive differences in OM&R strategies for different types of water services, these must be identified in the SAMP. A service provider can also choose to prepare different SAMPs for different “types” of water services supplied, if it wants to.

2.4 When must a SAMP be submitted?

Unless exempted:

- “***New service providers***⁴” must prepare and submit a SAMP for approval ***within 1 year*** of being registered as a service provider;
- “***Existing service providers***⁵” operating as of 1 October 2000, must prepare and submit a SAMP for approval in accordance with transitional arrangements to the Act (s1061):

Large ⁶ service providers	1 October 2002
Medium service providers	1 October 2003
Small service providers	1 October 2004.

⁴ A service provider who commenced operation after 1 October 2000 (s410).

⁵ A service provider operating at the time of commencement of the relevant provisions (s1061) of *Water Act 2000* (i.e. 1 October 2000).

⁶ Schedule 4 of the *Water Resources Act 2000* defines large, medium and small service providers.

2.5 Service and system overview

The Service and System Overview must show:

Registered services **Indicate** to which registered services the SAMP applies to i.e. “water service” and/or “sewerage service”.

Nature of the service/s **Describe**, in general terms:

- for a “water service”, the SAMP should indicate all “type/s” of service being provided i.e. bulk water; retail water; irrigation; stock and domestic;
- the “nature” of the registered service/s. Relevant considerations include whether the service is potable or non-potable; pressurised on-demand, or a constant flow scheme; dual reticulation; common effluent drainage scheme, etc;
- the “extent” of the registered service/s. This includes an estimate of the number of connections served by the registered service as a whole and by each “type” of water service, where relevant. (“Connections”, for the purpose of these guidelines, is defined on Page 8.)⁷
- the current and projected demand for each registered services/s, expressed in megalitres. Projected demand should, as a minimum, relate to a 10-year time horizon. Service providers must indicate whether a significant growth in demand for a particular registered service is expected, including expected growth for particular “types” of water service or individual schemes.

Infrastructure details **Document**, in broad terms, the infrastructure used to deliver each of the registered service/s to which the plan applies.

This includes identifying the major infrastructure facilities and elements, their purpose and capacity (capacity information is not required for pipelines). Major infrastructure facilities and elements include:

- water source facilities
- treatment plants
- pump stations
- reservoirs
- channels
- pipelines⁸.

This information should include a schematic layout clearly showing the linkages between each of the major infrastructure elements.

⁷ Note, where the term “connection” is used in the *Water Act 2000*, a different meaning applies (see Schedule 4 of the Act).

⁸ For large complex systems, identification of pipelines may be limited to trunk delivery mains/sewers only rather than documenting extensive networks of sewers, reticulation pipe work or distribution mains.

For the purposes of these guidelines, the Water Services Association of Australia (WSAA) definition of “connections”⁷ has been adopted for urban water and sewerage services.

A water property, for the purposes of determining connections, is:

- Connected to the service provider’s water system
- Subject to billing for water supply (fixed and/or consumption)
- A tenanted property, which is separately metered, and in respect of which the tenant is liable for water usage, counts as one property. The owner and tenant are not separately counted as water properties.

This includes:

- A connected non-rateable property;
- A connected but non-metered property.

But it does not include:

- A body corporate; or
- A rated but unconnected property.

A sewerage property, for the purposes of determining connections, is:

- A water property that is connected to the sewerage system (hence is separately billed for sewerage services (fixed and/or consumption)); and
- Any other property that is connected to the sewerage system and is separately billed for sewerage services (fixed and/or consumption).

NOTE: A sewerage property, which is also a trade waste property, counts as one property.

Connections are calculated by the addition of water or sewerage properties that fit the above criteria as follows:

Single Residential connections + Multiple Residential connections (No. of dwellings/property*properties or No. of dwellings) + Industrial connections + commercial connections + Other connections which don’t fit into above categories.

For the purposes of these guidelines, rural/irrigation service connections are defined as the number of customers served.

2.6 Level of service standards

Service providers must “identify standards for appropriate levels of service, including customer service, and performance indicators for the service” [s408 (3) (c)]. Once identified and set, service providers are required to comply with those standards (or levels of performance) as set out in the approved SAMP, in delivering services to customers (s414).

2.6.1 Set standards for a minimum range of performance indicators

Service providers must determine and set appropriate standards for a minimum range of performance indicators - these indicators are summarised below and outlined in detail in Appendix 1.

Service providers set standards (or levels of performance), not the regulator. The regulator does not

⁷ Note, where the term “connections” is used in *Water Act 2000*, a different meaning applies (see Schedule 4 of the Act).

in any way set standards to be achieved by the service provider. It is the responsibility of the service provider to determine a set of appropriate standards having regard to the unique circumstances of the system and the customers served.

The range of performance indicators relates to both:

- the customers' experience of the service;
- how the system needs to perform in order to deliver that service in continuity.

The indicators are grouped within four broad service outcome areas:

Day to day continuity of supply (water only)	<ul style="list-style-type: none"> • extent of unplanned interruptions to supply - (a) incidents; and (b) <i>connections affected by an interruption</i>⁹ • time for restoration of service • <i>customer interruption frequency</i> • relative incidence of planned and unplanned interruption incidents • <i>average interruption duration (planned and unplanned)</i> <p>response/reaction time to incidents</p>
Adequacy and quality of normal supply (water only)	<ul style="list-style-type: none"> • minimum pressure/flow • <i>connections with deficient pressure/flow</i> • drinking water quality (physical and chemical parameters only) • drinking water quality complaints • drinking water quality incidents
Effective transport of waste effluent (sewerage only)	<ul style="list-style-type: none"> • total sewage overflows • sewage overflows to customer property • odour complaints • response/reaction time to incidents
Continuity in the long term - (water and sewerage)	<p>Water</p> <ul style="list-style-type: none"> • water main breaks and leaks • system water loss <p>Sewerage</p> <ul style="list-style-type: none"> • sewer main breaks and chokes • sewer inflow/infiltration

When service providers set standards:

- **Service providers are required to set a standard for EACH of the performance indicators¹⁰ specified UNLESS the indicator is not relevant to the registered service being provided or Appendix 1 indicates the performance indicator is not mandatory yet.** For example, some indicators relate only to sewerage services. Others may not be relevant to all "types" of water service eg. drinking water quality will not be relevant to an irrigation service. The SAMP must indicate that a particular indicator/s is not relevant to the service provided or that it is not mandatory under these guidelines.
- **Service providers must identify how the standard for each indicator is to be "measured"** e.g. number of complaints "**per `000' connections**". These may be:
 - the default measures listed in Appendix 1; or
 - an alternative measure, which must:
 - have approval of the regulator as an equivalent and appropriate measure;
 - be used consistently for at least 5 years to facilitate trend analysis.

9 Note: it will only be mandatory for a service provider to set a standard for the italicised indicators from 1 October 2007..

10 See Appendix 1

- **Standards for some performance indicators will be *mandatory after 1 October 2007*.** These include:
 - number of connections affected by an unplanned interruption
 - customer interruption frequency
 - average interruption duration (planned and unplanned)
 - connections with deficient flow or pressure
 For more information, see Appendix 1.
- **Standards must be quantitative.** For example, for a given year, no more than “150” drinking water quality complaints will be received.
- **Standards must relate to the whole system** unless the service provider chooses to set different standards for different areas, schemes or “types” of water services i.e. they must be standards the service provider will achieve across the system for the entire registered service provided. Separate standards are *not* mandatory for different areas or schemes within the system, including different “types” of water services, but service providers may set different standards for different areas, schemes or “types” of water services. In the future, differential level of service standards may be mandatory (see Section 2.6.4).

Service providers must, when setting and recording achievement against service standards:

- comply with the definitions of individual performance indicators listed in Appendix 1 (unless approval has been given to use an alternative measure);
- for a particular incident, ensure that data is recorded for all relevant performance indicators. More than one performance indicator may be relevant to an event. For example, a main break could result in data being recorded for:
 - number of water main breaks and leaks;
 - response/reaction time;
 - extent of interruptions to supply;
 - time for restoration of service;
 - customer interruption frequency;
 - relative incidence of planned and unplanned interruption incidents;
 - average interruption duration.
- ensure they comply with the definition of “connections” above.

2.6.2 Modification of standards for rural/irrigation services ¹¹

The indicators described in Section 2.6.1 above and in Appendix 1 have primarily been used to measure the performance of urban water supply and sewerage systems. They will often require modification for rural/irrigation services. If a SAMP relates to rural/irrigation services the regulator and individual rural/irrigation service providers must agree on the final minimum range of performance indicators to be used for setting levels of service standards before the SAMP is submitted for approval.

2.6.3 Methodology for setting standards

Service providers must outline the methodology used for setting standards in the SAMP, including, for example, any cost considerations.

These Guidelines do not prescribe the methodology to be used. Nor does the regulator in any way “approve” the methodology used by the service provider.

However, service providers are required to have regard to best practice industry standards for their registered services, when preparing their SAMP.

¹¹ Rural/irrigation water services are primarily irrigation, drainage, and stock and domestic services.

2.6.4 Differential level of service standards - mandatory after 1 October 2007

The level of service standards are those the service provider seeks to achieve across the system for the service provided. Reporting on level of service standards across the system can mean the service provider effectively reports on “aggregated” performance. This can be misleading as some areas/customers may in fact receive a significantly lower level of service.

This requirement will be mandatory after 1 October 2007.

For situations where there is a contiguous block of connections receiving a consistent level of service that is *less than* 80% of the standard for one or more performance indicators across the system, AND the number of connections within the block exceeds *either* 200 connections *or* is more than 15% of the total number of connections to the service, *whichever is greater*, the service provider must set and report on separate standards for that contiguous block in the SAMP, in a similar manner as the balance of the system.

It is not necessary to develop a separate SAMP for those areas receiving a different level of service standards. However, any differences in the operations, maintenance and renewals strategy applied to those areas should be clearly identified in the SAMP.

2.7 Operations, Maintenance and Renewals (OM&R) Strategy

The SAMP must include an operation, maintenance and renewals (OM&R) strategy that shows how the level of service standards will be achieved.

To do this the service provider must:

- broadly document the strategies (relating to operation, maintenance and renewal of infrastructure) that are in place to ensure that the level of service standards are achieved. Minimum requirements for strategies are defined below.
- adopt a forward looking focus, addressing at least a **10 year period**;
- outline the “process” for **monitoring performance** against service standards
- outline actions to be taken to implement the strategies.

2.7.1 Minimum requirements for strategies

The service provider must include the following within their operations, maintenance and renewals strategies.¹²

System Operation and Maintenance

Strategies

State, in broad terms:

- how the system as a whole is operated, how services are delivered to meet normal day demand, peak demands and other demand variations (eg. seasonal);
- what control and monitoring systems/processes are in place to ensure operations are effective in meeting normal, peak and other demand variations. This includes warning mechanisms for system disruption and failure;

continued...

¹² Note: operations and maintenance are presented as a combined strategy in these requirements. This reflects the common industry practice for O&M to be generally linked and integrated. However, service providers may choose to present the strategies individually.

System Operation and Maintenance

(continued)

- what maintenance strategies and activities are in place for relevant asset groups. This should include planned and reactive maintenance:
 - asset groups may include pipelines, pump stations, channels, treatment plants, reservoirs, water source facilities, buildings and other electrical, mechanical, and telemetry equipment;
 - strategies and activities may include inspections, testing, preventative maintenance, cleaning and repair such as main breaks and equipment and infrastructure failure.

Outline the strategy that is in place to ensure availability of suitably qualified operational and maintenance staff.

Documented procedures

List current documented procedures and manuals ¹³ for:

- *operation* of the system, these may include:
 - operation of treatment plants, pump stations, water source facilities, reservoirs, channels, pipelines and control and monitoring systems;
 - response and contingency procedures for dealing with system and equipment failure, power disruption or failure, overflows, connections, complaints (for drinking water quality, odour, low pressure and flow) and water source disruption or failure;
- *maintenance* of the system, including:
 - planned and reactive maintenance procedures;
 - frequency of maintenance for different asset groups.

For each of the above procedures, service providers must state:

- the date each procedure was last reviewed;
- when proposed new procedures will be completed.

Outline the review process used for all documented procedures and manuals in order to maintain currency, including the development of new procedures and their implementation.

Renewals strategy

Outline the process for developing a renewals program for the replacement and rehabilitation of existing infrastructure.

Outline processes for updating the renewals strategy, which ensure its outcomes remain current.

Actions

List proposed major or significant actions to be undertaken to implement the OM&R strategy to ensure it remains appropriate to meet the system level of service standards. The target date for completion of each action must also be included

Actions may include undertaking studies, assessments, construction of new infrastructure, and review and documentation of procedures and processes.

¹³ Note: service providers are NOT required to supply these documents to the regulator.

2.8 Financial Arrangements

The proposed financial arrangements for implementing the SAMP must be outlined in a financial statement, which shows the:

- planned expenditure (for a 10 year period) for the operation, maintenance and renewal of the system's infrastructure. Details of the planned expenditure are *not* required for each of operation, maintenance or renewal groups *or* asset type groups;
- the anticipated funding source for the proposed expenditure. The funding source may include infrastructure charges, capital works subsidy, revenue, and community service obligations. A break-up between the different types of funding sources is *not* required.

In circumstances where the planned expenditure *will*:

- prior to a scheduled SAMP review, differ from that shown in the financial statement;
- adversely affect the service provider's ability to implement the SAMP, the service provider may either:
 - seek the agreement of the regulator to change the SAMP in accordance with s413 of the Act; or
 - submit a new SAMP for approval.

Some providers may have all or part of the required financial information in existing documentation or as part of another plan (eg. a financial sub-plan of a Total Management Plan). In this case the service provider may submit this financial information as part of the SAMP, *provided that*:

- the information submitted addresses *all* issues as required by the Act and these Guidelines. (NB where existing information addresses only *part* of the SAMP requirements, additional information will need to be submitted);
- the documentation submitted *clearly* identifies the information, which is intended to address financial arrangement requirements.

2.9 Certification by a registered professional engineer ¹⁴

A registered professional engineer must:

- certify each strategic asset management plan. The engineer may be:
 - an employee of the service provider;
 - the engineer who prepared the strategic asset management plan;
 - an engineer employed to operate the service provider's infrastructure;
 - an engineer independent of the service provider;
- provide a written certification to accompany a strategic management plan stating:
 - the plan is appropriate for the service provider's infrastructure and registered services;
 - his or her name and registration details;

The registered professional engineer is expected to take into account the following matters prior to certifying the SAMP:

- Does the plan comply with, and address all requirements of s408 of the Act and these Guidelines;
- Will the strategies, processes, procedures and actions outlined in the operation, maintenance and renewals strategy achieve the level of service standards;
- Will the proposed financial arrangements be sufficient/adequate to implement the SAMP.

¹⁴ The registered professional engineer must be a registered professional engineer, a registered professional engineering company or a registered professional engineering unit as defined by the *Professional Engineers Act 1988*.

3 Having a SAMP approved

A SAMP must be submitted to the regulator for approval. The timing for submission is outlined in Section 2.4.

The regulator must approve a SAMP within three months of receiving it, unless the regulator is satisfied it has not been certified by a registered professional engineer or is inadequate in a material particular.

Before approving a SAMP, the regulator may, but is not obliged to, obtain advice from an advisory council (established under s1005 of the Act). At the time of publication of this guideline, no advisory councils have been established.

3.1 Three possible outcomes upon submission

These are:

Approve the SAMP

The regulator must give written notice of approval that includes details of when regular reviews and audits of the approved plan must be conducted (see section 6.2).

NOT approve it because it was not certified by a registered professional engineer

The SAMP is returned to the service provider with a notice stating:

- certification is required;
- the time by which the certified document must be returned.

(The regulator must ensure that the time allowed for the plan to be certified and returned to the regulator is reasonable.)

NOT approve it because the regulator is satisfied that it is inadequate in a material particular

The SAMP is returned to the service provider with an information notice ¹⁵ stating:

- how the plan is inadequate and requiring that:
 - it be revised and returned for approval within a stated time; **OR**
 - a new SAMP be prepared, certified and returned for approval within a stated time.

(The regulator must ensure that the time allowed for the revised or new certified plan to be returned is reasonable.)

¹⁵ Schedule 4 of the *Water Resources Act 2000* defines an information notice.

In deciding whether a SAMP is “inadequate in a material particular”, the regulator will consider the following matters:

- whether the requirements in s408 of the Act and these Guidelines have been addressed;
- whether these requirements are addressed in adequate or sufficient detail given:
 - the nature, size and complexity of the infrastructure;
 - the services provided;
- whether the SAMP:
 - is appropriate for the registered service and infrastructure;
 - if implemented appropriately is likely to deliver the nominated level of service standards;
- cost considerations for the service provider and its customers in addressing any inadequacies.

3.2 Appeal against the decision of a regulator ¹⁶

A service provider can apply to the regulator for an internal review of a decision about the SAMP only if the information notice states that the SAMP is inadequate in a material particular. There is no right to an internal review if the SAMP is rejected only because it has not been certified.

If the service provider is not satisfied with the review decision, arbitration can be sought from the Queensland Competition Authority.

3.3 Can a SAMP be changed once it is approved?

A SAMP may be changed after:

- it is approved, with the regulator’s agreement (s413); and
- a regular review (s416) (note: a different process applies to obtain approval in this situation, see Section 4.2).

¹⁶ See Chapter 6 of *Water Act 2000* for details relating to appeal provisions.

4 Annual reports, reviews and audits

4.1 Annual reports

Service providers must submit an annual report for each financial year after a SAMP has been approved. The report must be given to the regulator within 120 business days of the end of the financial year ¹⁷ (s430).

As annual reporting requirements also apply to Customer Service Standards, service providers may submit a combined SAMP/CSS annual report.

Members of the public must be able to inspect or purchase copies of annual reports and relevant reports.

4.1.1 Contents of annual reports

The annual report must:

Measure the service provider's performance for the financial year against the SAMP

For level of service standards, the data reported should include:

- “actual” levels of service achieved (this could be in excess of standards set by service provider);
- an appropriate confidence grading ¹⁸ for the data reported;
- any statements qualifying the data reported - this is not a mandatory requirement, but may be appropriate in some circumstances such as where extreme wet weather events have affected data for a particular year.

Document actions taken by the service provider to implement the SAMP (including application of funds)

This includes:

- actions that have been undertaken;
- reasons for failing to undertake a particular action nominated by the service provider for this reporting period;
- application of funds in accordance with the proposed financial arrangements for implementing the SAMP.

Document outcomes of any regular reviews or audits

This includes:

- outcomes of any regular reviews, including how the service provider has addressed issues raised by the review;
- summary of the findings and any recommendations of audit reports (regular and spot audit reports) given to the regulator in this reporting period.

¹⁷ Unless Section 4.1.2 *Annual Reports for Local Governments* applies to the report.

¹⁸ See Section 4.1.3 for details.

4.1.2 Annual Reports for Local governments

Local government service providers do *not* have to prepare a separate annual report **provided that**:

- the information required for the annual report is included in a report under s531 of the *Local Government Act 1993*; AND
- a copy of that report is given to the regulator within 30 business days of its adoption by the local government.

4.1.3 Confidence gradings for level of service data

A service provider should assign a “confidence grading” when reporting the actual level of service achieved against the level of service standards. The “confidence grading” should identify a “reliability band” and an “accuracy band” for each item of data. Relevant bands include:

Reliability Bands

A	Highly reliable	Data is based on sound records, procedures, investigations or analyses that are properly documented and recognised as the best available assessment methods.
B	Reliable	Generally as in “A”, but with minor shortcomings eg. some of the documentation is missing, the assessment is old, or some reliance on unconfirmed reports; or there is some extrapolation are made (eg. extrapolations from records that cover more than 50% of the service provider’s system).
C	Unreliable	Generally as in “A” or “B”, but data is based on extrapolations from records that cover more than 30% (but less than 50%) of the service provider’s system.
D	Highly unreliable	Data is based on unconfirmed verbal reports and/or cursory inspections or analysis, including extrapolations from such reports/inspections/analysis.

Example

In reporting on achievement against the level of service target for the number of interruptions per ‘000’ connections, the confidence grading assigned was A2. That is the data was based on sound records (Highly reliable - Band A) estimated to be within +/- 5% (Accuracy Band - 2).

The grading assigned depends on the type and sophistication of monitoring systems that are in place. For example, system water loss could be measured by comprehensive metering (higher grading) or simply by a drop test (lesser grading). The feasibility and efficacy of employing different measurement tools will vary between service providers depending on the size, nature and complexity of the system and available resources.

Accuracy Bands

1	+/- 1%
2	+/- 5%
3	+/- 10%
4	+/- 25%
5	+/- 50%
6	+/- 100%

4.2 Regular Reviews

Service providers must regularly review a SAMP. Regular reviews must be undertaken in accordance with s415 and s416 of the Act.

The outcome of a review and the way matters in the review have been addressed must be reported in the annual report (see Section 4.1).

If the review indicates that the SAMP should be changed to reflect best practice industry standards for the types of services provided by the service provider, the service provider must prepare and submit a revised SAMP to the regulator within 30 business days of completion of the review (s416). The same approval process applies for the modified SAMP as for the initial SAMP (see Section 3).

4.2.1 Purpose of review

A SAMP must be regularly reviewed to ensure that it remains relevant having regard to industry best practice.

The service provider should also consider the following matters when undertaking a regular review of a SAMP:

- Does the SAMP meet the requirements in s408 of the Act and these Guidelines;
- Are these requirements addressed in sufficient detail given the nature, size and complexity of the infrastructure and services provided;
- Is the SAMP appropriate for the registered services and infrastructure;
- Does it deliver the level of service standards nominated by the service provider.

The service provider should review each component of the SAMP using a 10-year time frame commencing from the time the review is undertaken.

4.2.2 Review interval

Service providers may conduct these reviews internally. Reviews must take place at the time intervals stipulated by the regulator in the approval notice (see Section 3.1).¹⁹ Generally speaking, reviews will be required at intervals ranging from 2 to 5 years. The regulator, when setting these time intervals, takes into account:

- the number and timing of the action plans which the service provider is committed to undertaking;
- the projected growth rate in demand;
- the estimated confidence grading to be achieved in the annual reporting;
- the complexity of the system.

4.3 Regular audits

A service provider may be required to undertake regular audits of its SAMP. The audit must be undertaken in accordance with s417 and s418 of *Water Act 2000*.

A service provider must summarise the findings and any recommendations of a regular audit report in the annual report.

¹⁹ Note: the Act states that regular reviews must not be required more than once a year.

4.3.1 The audit report

The audit report must be prepared by a registered professional engineer (the auditor) who is independent of the service provider. The auditor must NOT be:

- an employee of the service provider;
- the engineer who prepared or certified the SAMP; or
- an engineer employed in operating the service provider's infrastructure.

The audit report must be given to the regulator within 30 business days of its completion. **The report must be made available for inspection and purchase.**

Its purpose is to:

- assess a service provider's compliance with its SAMP;
- verify the accuracy of any performance data included in the SAMP annual report;
- assess the service provider's technical ability to meet the service and performance standards identified in its SAMP.

4.3.2 Statutory declaration

The audit report must be accompanied by statutory declarations by the service provider and auditor who state:

- **for service provider:**
 - that no false or misleading information was knowingly given to the auditor;
 - that all relevant information was given to the auditor;
- **for the auditor:**
 - the auditor's qualifications and relevant experience;
 - that the auditor has not knowingly included any false, misleading or incomplete information in the report;
 - that the auditor has not knowingly failed to reveal any relevant information or document to the regulator;
 - that the regular audit report:
 - addresses the relevant matters for the evaluation
 - is factually correct;
 - the opinions expressed in the report are honestly and reasonably held.

4.3.3 Audit interval

Regular audits must take place at the time intervals stipulated by the regulator in the SAMP approval notice (see Section 3.1) ²⁰. Generally speaking, audits will be required at intervals ranging from 2 to 5 years. The regulator, when setting these time intervals, takes into account:

- the number and timing of the action plans which the service provider has committed to undertaking;
- the projected growth rate in demand;
- the estimated confidence grading which will be achieved in annual reporting;
- the complexity of the system.

²⁰ Note the Act states that regular audits must not be required more than once every two years.

4.4 Spot Audits

4.4.1 When can a spot audit be arranged?

The regulator can arrange for spot audits of a service provider's SAMP if the regulator is satisfied, or reasonably believes that:

- a service provider is not complying with its SAMP; or
- the SAMP is no longer adequate for the service provider's registered services; or
- the service provider is not complying with its regular audit obligations; or
- the service provider has not given the regulator a copy of a regular audit report.

Before arranging a spot audit, the regulator must issue a show cause notice. The notice must:

- explain why the audit is proposed;
- state the grounds for this action;
- allow submissions from the service provider to be made about the proposed action.

4.4.2 Spot audit report

A spot audit report must be prepared by a registered professional engineer and be undertaken in accordance with s419 and 420 of the Act.

The spot audit report must be accompanied by a statutory declaration by the auditor following the same form as for a regular audit report (see Section 4.3.2).

The regulator is required to give the service provider a copy of the report within 30 business days of its completion.

Spot audits do *not* have to be made available for inspection and purchase, but the findings of the spot audit and any recommendations must be included in the SAMP annual report.

4.4.3 Consequences of a spot audit

The regulator must give the service provider an information notice if the spot audit report concludes that the SAMP:

- is inadequate in a material particular;
- was not properly carried out by the service provider.

The information notice will require that:

- the inadequacy be rectified; or
- the SAMP be properly carried out by the service provider;

whichever is relevant, within a stated reasonable time.

The service provider must comply with the notice, unless there is a reasonable basis for not complying.

The service provider can apply to the regulator for an internal review of this decision and obtain a review decision. If the service provider is not satisfied with the review decision, arbitration can be sought from the Queensland Competition Authority.²¹

²¹ See Chapter 6 of Water Act 2000 for details relating to appeal provisions.

The regulator may recover the cost of completing a spot audit from the service provider if the spot audit report states that the SAMP:

- is inadequate in a material particular;
- was not properly carried out by the service provider.

4.5 Obligation to allow access for audits

During regular or spot audits a service provider must give the auditor (and any person employed or authorised by the auditor) free access to its infrastructure and related records. However, these people must not enter a customer's premises unless the customer agrees.

Appendix 1 ²²

PERFORMANCE INDICATORS <small>(service providers must set standards for these issues)</small>	DEFAULT PERFORMANCE MEASURE <small>(how the standard is to be expressed and measured. Service providers may define an alternative measure)</small>	DEFINITION/COMMENT
Day to day continuity (water only)		
Extent of unplanned interruptions - EITHER <ul style="list-style-type: none"> • connections experiencing an unplanned interruption; OR • events/incidents causing an unplanned interruption 	<ul style="list-style-type: none"> • number per '000' connections • number per 100km main 	<p>BEFORE 1 October 2007 - service providers can use EITHER a connections-based indicator or an incidents-based indicator.</p> <p>AFTER 1 October 2007 - service providers will be required to use BOTH a connections-based indicator and an incident-based indicator.</p> <p>Definition:</p> <ul style="list-style-type: none"> • an interruption commences when water is no longer available at the customer's first cold water tap and ceases when "normal" service is restored (i.e. "no" water available); • "unplanned" interruption is when the customer has not received at least 24 hours notification of the interruption or when duration exceeds that originally notified. • doesn't include interruptions caused by bursts or leaks in the service connection to internal plumbing i.e. in infrastructure owned by the customer; • applies to work/action by either the service provider or a third party; • if a property experiences more than one interruption then it is counted for each event; • if an event causes more than one interruption incident, then it is counted as a separate event.
<ul style="list-style-type: none"> • time for restoration of service - <i>unplanned</i> interruptions 	<ul style="list-style-type: none"> • % restored within 5 hours 	<p>Definition:</p> <ul style="list-style-type: none"> • where a connections-based indicator is used for the above parameter) - proportion of total number of connections experiencing an unplanned interruption where service is restored within 5 hours (or other time nominated by the service provider). If a connection experiences more than 1 interruption then it should be counted for each event;

continued...

22 Where available, Water Services Association of Australia (WSAA) definitions for performance measures have been adopted.

PERFORMANCE INDICATORS <small>(service providers must set standards for these issues)</small>	DEFAULT PERFORMANCE MEASURE <small>(how the standard is to be expressed and measured. Service providers may define an alternative measure)</small>	DEFINITION/COMMENT
Day to day continuity (water only) <small>(continued)</small>		
		<p><small>(continued)</small></p> <ul style="list-style-type: none"> for an incident-based indicator (above) - proportion of interruptions which are restored within 5 hours (or other time nominated by the service provider) “restoration” occurs where all interrupted connections are restored to normal service (i.e. regardless of whether connections are progressively restored e.g. due to location of isolation valves).
<ul style="list-style-type: none"> customer interruption frequency (<i>ONLY mandatory after 1 October 2007</i>) 	<ul style="list-style-type: none"> % of connections experiencing more than (1,2,3,4,5 or more) interruptions 	<p>Definition:</p> <ul style="list-style-type: none"> number of connections that experience 1,2,3,4,5 or more interruptions. This does not include interruptions caused by bursts/leaks in the service connection to internal plumbing.
<ul style="list-style-type: none"> relative incidence of planned and unplanned interruption incidents 		<p>Measure can be a quantitative value within a range, or less than X</p> <p>Definitions:</p> <ul style="list-style-type: none"> “planned” interruption is when the customer is given at least 24 hours notification of the interruption. Planned work of which the customer is not notified is an unplanned interruption. If the interruption duration is longer than notified, the interruption is unplanned. Does not include planned interruptions caused by routine meter work; “unplanned” interruption is when the customer has not received at least 24 hours notification of the interruption or when duration exceeds that originally notified. Doesn’t include interruptions caused by bursts or leaks in the service connection to internal plumbing.

PERFORMANCE INDICATORS <small>(service providers must set standards for these issues)</small>	DEFAULT PERFORMANCE MEASURE <small>(how the standard is to be expressed and measured. Service providers may define an alternative measure)</small>	DEFINITION/COMMENT
Day to day continuity (water only) <small>(continued)</small>		
<ul style="list-style-type: none"> average interruption duration - planned and unplanned (ONLY mandatory after 1 October 2007) 	<ul style="list-style-type: none"> hours 	<p>Can be a quantitative value within a range, or less than X.</p> <p>Calculated as the duration of ALL interruptions (i.e. planned and unplanned) DIVIDED by the number of events.</p>
<ul style="list-style-type: none"> response/ reaction time 	<ul style="list-style-type: none"> hours 	<p>Response time for incidents, regardless of whether the incident causes an interruption to customers. Determined as the time it takes to get a person/team on-site to fix the problem.</p>
Adequacy and quality of normal supply (water only)		
<p>Pressure and/or flow</p> <ul style="list-style-type: none"> minimum flow; AND/OR minimum pressure 	<ul style="list-style-type: none"> litres/min at connection; or m³/sec metres head 	<p>Definition:</p> <ul style="list-style-type: none"> minimum flow and/or pressure that customers can expect to receive at the connection
<ul style="list-style-type: none"> connections with deficient pressure and/or flow (ONLY mandatory after 1 October 2007) 	<ul style="list-style-type: none"> % of total connections 	<p>Definition:</p> <ul style="list-style-type: none"> number of connections with a flow/pressure deficiency i.e. have, or are likely to receive, a service flow/pressure below the minimum level nominated by the service provider
<p>Drinking water quality - EITHER</p> <ul style="list-style-type: none"> compliance with nominated industry guideline (e.g. NHMRC); OR 	<ul style="list-style-type: none"> compliance - yes or no 	<p>Physical/chemical quality of water only.</p> <p>Current industry guidelines e.g. NHMRC are not mandatory and are in a large part qualitative and tailored to suit different types of service providers. To reflect this, service providers can EITHER:</p> <ul style="list-style-type: none"> nominate the industry guideline (and guideline % values) against which they measure compliance for <p style="text-align: right;"><small>continued...</small></p>

PERFORMANCE INDICATORS	DEFAULT PERFORMANCE MEASURE	DEFINITION/COMMENT
(service providers must set standards for these issues)	(how the standard is to be expressed and measured. Service providers may define an alternative measure)	
Adequacy and quality of normal supply (water only) <small>(continued)</small>		
<ul style="list-style-type: none"> specific standards for physical/chemical quality 	<ul style="list-style-type: none"> compliance - yes or no 	<p>physical/chemical quality of water (e.g. values from NHMRC 1996); OR</p> <ul style="list-style-type: none"> nominate level of service standards for specific physical/chemical water quality standards (e.g. colour, turbidity, pH, iron, manganese); AND indicate intended % compliance with those levels.
<ul style="list-style-type: none"> drinking water quality complaints 	<ul style="list-style-type: none"> number per '000' connections 	<p>Measure can be a quantitative value within a range; or less than X</p> <p>Definition (based on WSAA):</p> <ul style="list-style-type: none"> total number of complaints received by the service provider relating to drinking water quality and which are attributed to the service provider's assets or action. This includes any complaint regarding discolouration, taste, odour, stained washing etc. It does not include complaints relating to service interruption, adequacy, restriction, pressure; service providers are not required to make judgements on whether the complaint is justified; complaints can be received through any medium e.g. face to face; telephone; letter; fax; email; includes complaints made to the service provider and/or operator of the infrastructure.
<ul style="list-style-type: none"> drinking water quality incidents 	<ul style="list-style-type: none"> number 	<p>Measure can be a quantitative value within a range; or less than X</p> <p>Definition:</p> <ul style="list-style-type: none"> complementary to water quality complaints indicator e.g. one incident can result in 1,000 complaints from customers; an "incident" is any event affecting the water service provider's infrastructure, or the resource, which adversely affects the water quality delivered to customers, and to which water quality complaints can be attributed.



PERFORMANCE INDICATORS <small>(service providers must set standards for these issues)</small>	DEFAULT PERFORMANCE MEASURE <small>(how the standard is to be expressed and measured. Service providers may define an alternative measure)</small>	DEFINITION/COMMENT
Effective transport of waste effluent (sewerage only)		
<ul style="list-style-type: none"> sewage overflows - total regardless of where occur 	<ul style="list-style-type: none"> number per 100km main 	Definition: <ul style="list-style-type: none"> total number of overflows attributable to the service provider's assets or action - regardless of where the overflow occurs; does not include overflows caused by infrastructure owned by customers includes both wet and dry weather overflows; includes overflows from points designed to overflow.
<ul style="list-style-type: none"> sewage overflows to customer property 	<ul style="list-style-type: none"> number per '000' connections 	Definition: <ul style="list-style-type: none"> total number of overflows occurring on customer property which are caused by the service provider's assets or action; does not include overflows caused by infrastructure owned by customers; includes both wet and dry weather overflows.
<ul style="list-style-type: none"> odour complaints 	<ul style="list-style-type: none"> number per '000' connections 	Measure can be a quantitative value within a range; or less than X Definition: <ul style="list-style-type: none"> total number of odour complaints received by the service provider that are attributable to the service provider's wastewater assets or action; service providers are not required to judge whether the complaint is justified; complaints can be received via any medium e.g. in person, phone; letter; fax; email; includes complaints made to the service provider and/or operator of the infrastructure.
<ul style="list-style-type: none"> response/ reaction time 	<ul style="list-style-type: none"> hours 	Response time for incidents, <i>regardless</i> of whether the incident causes an interruption to customers. Determined as the time it takes to get a person/team on-site to fix the problem.

PERFORMANCE INDICATORS	DEFAULT PERFORMANCE MEASURE	DEFINITION/COMMENT
(service providers must set standards for these issues)	(how the standard is to be expressed and measured. Service providers may define an alternative measure)	
Continuity in the long term (a) water		
<ul style="list-style-type: none"> water main breaks and leaks 	<ul style="list-style-type: none"> number per 100km main 	<p>Definition:</p> <ul style="list-style-type: none"> main breaks include bursts and leaks in all mains (reticulation, distribution and trunk mains). Leaks include main faults that can be fixed without shutting down the main. Does not include bursts/leaks in the service connection to internal plumbing.
<ul style="list-style-type: none"> system water loss 	<ul style="list-style-type: none"> l/ connection/ day 	<p>Definition:</p> <ul style="list-style-type: none"> system water loss is equal to:- (Master meter volumes MINUS total metered consumer volumes; and MINUS total estimated non-metered volumes) i.e. difference between the total amount of water put into system and the quantity delivered to customers (with adjustments); adjustments may be made for: <ul style="list-style-type: none"> estimated non-metered consumption by customers; estimated "other" non-metered consumption, including estimates of water used for fire fighting, mains flushing, water taken by contractor or councils, and other consumption due to operations; estimated loss of volume due to errors in customer metering <p>PROVIDED these are based on proper records and/or assessment;</p> <ul style="list-style-type: none"> does not include losses from major dams and reservoirs, or evaporation losses

PERFORMANCE INDICATORS (service providers must set standards for these issues)	DEFAULT PERFORMANCE MEASURE (how the standard is to be expressed and measured. Service providers may define an alternative measure)	DEFINITION/COMMENT
Continuity in the long term (b) sewerage		
<ul style="list-style-type: none"> sewer main breaks and chokes 	<ul style="list-style-type: none"> number per 100km main 	Definition: <ul style="list-style-type: none"> chokes are confirmed partial or total blockages occasioning an interruption to service. Chokes that change the level of service offered by a pipe ie bath or toilet drains away slowly as well as complete interruptions should be counted. Breaks include bursts and leaks. This applies to sewer chokes/bursts/leaks that occur in the reticulation main (excluding house connection and branches).
<ul style="list-style-type: none"> sewer inflow and infiltration 	<ul style="list-style-type: none"> ratio 	Definition: <ul style="list-style-type: none"> peak day flow (ML/day) DIVIDED by average day flow (ML/day) infiltration in WSAA includes stormwater, illegal stormwater connections and groundwater infiltration



Queensland
Government
Natural Resources
and Mines

DEPARTMENT OF NATURAL RESOURCES AND MINES

GUIDELINES FOR PREPARING STRATEGIC ASSET MANAGEMENT PLANS

This version approved 20th February 2002