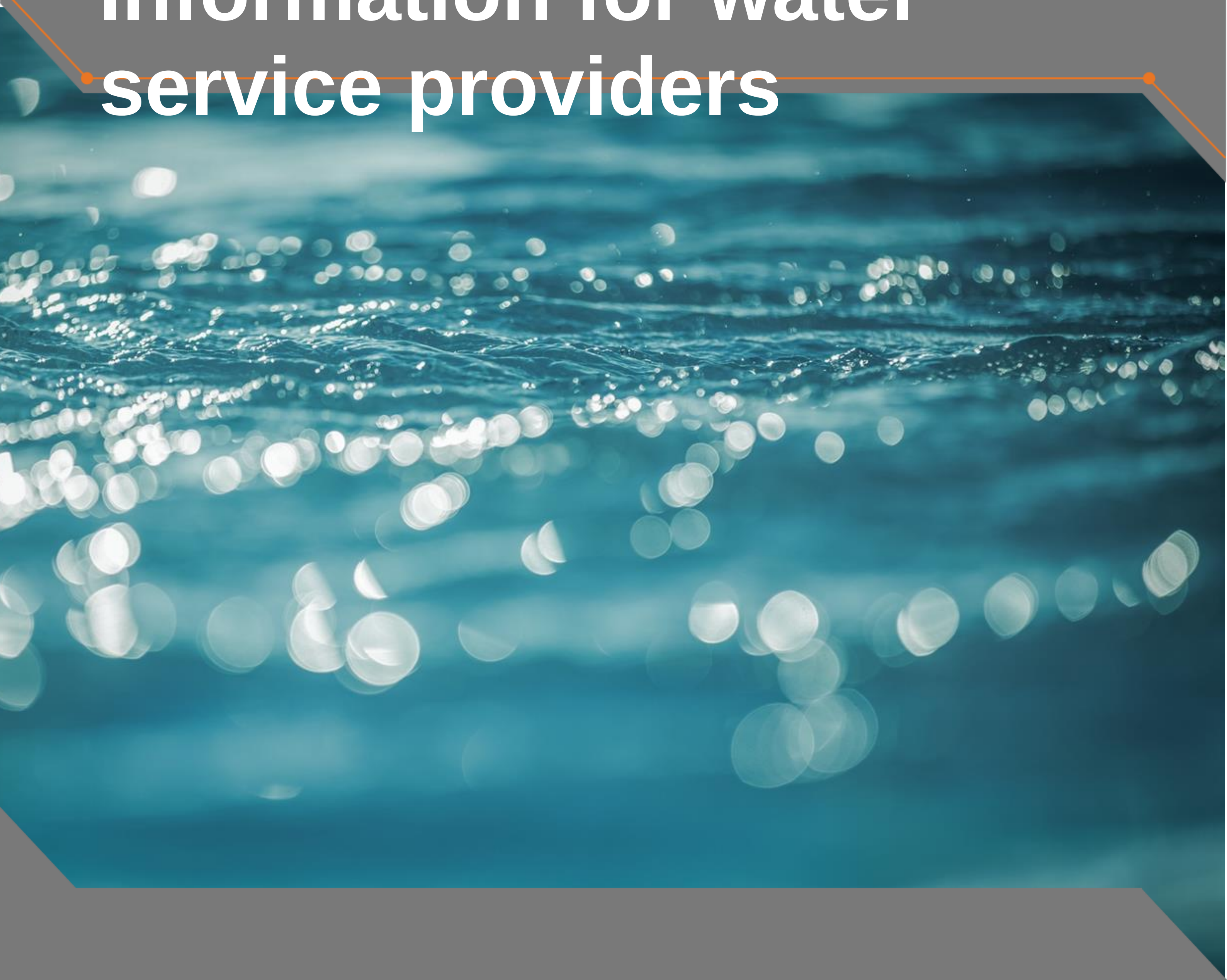
Department of Regional Development, Manufacturing and Water

Urban water security assessments - Information for water service providers



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Version history

Version	Date	Comments
1.00	14/09/2023	**Original document**

Approval

Position	Name	Date
Director, Urban Water Supply Planning	R. Priman	14/09/2023

Keywords

UWS/2023/6553, guideline, urban water security assessments, UWSA, Information for water service providers

Summary

Urban water security is essential for maintaining the health and growth of our communities and is underpinned by the availability and reliability of water supply sources to sustainably meet water needs now and into the future.

The Department of Regional Development, Manufacturing and Water collaborates with councils (as registered water service providers) to develop a shared understanding of urban water security for regional communities through a prioritised program of urban water security assessments (UWSAs). These assessments look at the capability of the existing and planned urban water supply sources to provide appropriate current and future security of water supply to the respective communities.

Each assessment identifies and quantifies or qualitatively describes the associated water security risks for a particular community, generally in terms of the potential frequency, severity and duration of water supply shortfalls and water restrictions. In addition, the assessments appraise whether the identified water security risks are acceptable for the community (taking into account factors such as population size, consequences of supply shortfalls and alternative supply options) and what actions (if any) may be required to ensure future water security for the community.

UWSAs include detailed analyses of the key factors that influence water security, including water supply sources, current water use, projected future population and water demands, climate variability, climate change impacts, hydrologic modelling (where appropriate) to determine supply reliability and the extent of supply shortfalls, assessment of contingency and emergency supplies (existing or potential), analysis of likely impacts of demand reduction and leakage loss, raw water quality implications, and potential solutions for water security issues.

This document outlines broadly the assessment process undertaken in a partnering arrangement with councils. It discusses the matters that need to be considered and analysed during each assessment to enable a clear understanding of the assessment process and the type and depth of analysis to be undertaken.

The development of a shared understanding of urban water security risks enables councils as the water service provider to plan appropriately to meet projected future water supply needs and ultimately for all parties including the State to understand the potential financial and other ramifications.

Contents

1.0 Introduction

Appropriate urban water security is essential for maintaining the health and growth of communities, ensuring the water supply needs of residents, businesses, industry, and tourism are met. Ideally, the security of supply provided should be derived after consultation between the water service provider and the community in accordance with the National Urban Water Planning Framework 2008, though this may not always be practical. The provision of an appropriate security of urban water supply should be sustainable, meeting the needs of the community hydrologically, socially, environmentally, economically, and financially. Appropriate water security should be able to be met now, and there should be a high degree of confidence that the needs can be met in the future.

Urban water security is underpinned by the availability, accessibility, vulnerability, resilience, and dependability/reliability of the sources of supply to meet the community's water needs. Water security (particularly short-term) is influenced by the ability to maintain continuity of supply—i.e. the condition, capacity, capability and resilience of the water supply infrastructure to maintain a consistent and adequate volume of water to meet the community's water needs.

The Department of Regional Development, Manufacturing and Water (DRDMW) collaborates with individual water service providers (WSPs) (usually councils for regional communities in Queensland) to prepare urban water security assessments (UWSA) previously known as regional water supply security assessments (RWSSAs).

UWSAs aim to achieve a shared understanding of a community's water security, including current and future population growth and associated water demand, and the existing and future water supply capability and risk (among other factors). This information provides the basis for effective and appropriate water supply planning and reduces risk both for WSPs and the State by improving WSPs' understanding of their water security, thus enabling the State to target assistance when appropriate to communities.

Having the State and WSP collaborating to undertake an assessment helps provide a more robust and transparent assessment process using the most appropriate information and expertise. It also means that the assessment approach is consistent across Queensland.

2.0 Purpose

This document identifies and outlines the key considerations and analyses undertaken during each UWSA, to provide a better understanding of the assessment process and the type and depth of analyses required.

Each assessment identifies and quantifies or qualitatively describes the associated water security risks for a particular community, generally in terms of the potential frequency, severity and duration of water supply shortfalls and water restrictions. In addition, the assessments appraise whether the identified water security risks are acceptable for the community (considering factors such as population size, the consequences of supply shortfalls and alternative supply options) and what actions (if any) may be required to ensure future water security for the community.

3.0 Assessment process

UWSAs are a partnership planning assessment process with Councils, with engagement occurring early and continuously throughout the assessment process.

The department has also separately created a water security statement (WSS) guide to help local governments to develop their own assessments and understand the water security needs of their communities (especially smaller communities such as those with less than 2000 residents), which can be found at: https://www.rdmw.qld.gov.au/__data/assets/pdf_file/0003/1591464/wss-template-guidance.pdf

The preparation of a UWSA requires analysis of the key factors that influence water security for Queensland communities, including:

- water supply sources
- current water use
- projected future population and water demands
- climate variability, and
- climate change impacts.

Hydrologic modelling will often be required to determine:

- supply reliability
- potential future water security solutions including assessment of:
  - the likely impacts of demand reduction and leakage loss, and
  - existing and potential contingency and emergency supply options

Assessments are usually initiated either:

- following a request by a council, or
- through a formal invitation sent to council following a departmental community prioritisation process (following consideration of population size, risk, contingency options, and other factors).

Although it is the responsibility of the council (as the registered WSP) to provide, as far as practical, for the health, safety and well-being of its communities through the provision of adequate and reliable water supplies, the State seeks to have confidence and ensure that this occurs in accordance with water supply security and continuity of supply under the *Water Supply (Safety and Reliability) Act 2008*.

The department works with providers to develop a shared understanding of water security risks and encourage development of appropriately secure water supplies. On rare occasions the department may apply regulatory levers under the *Water Supply (Safety & Reliability) Act 2008* to require a provider to take actions to mitigate water security risks.

Councils are expected to provide information on water use, sources of supply, source water quality, infrastructure including proposed future augmentations, drought response plans and operational strategies where there are multiple sources of supply. The department will undertake or arrange the specialised water security assessments to build upon historical knowledge and analyse what might happen beyond the historical record including the possible impacts of climate change. Such hydrologic modelling builds upon the models established for the sharing of water through the State's statutory 'Water Plan' process under the *Water Act 2000* to ensure that the best available science is used to understand risks and develop potential water supply solutions.

The WSP should seek to ensure that a community it services will always have at least enough water to supply its essential water demands (i.e. it is not acceptable to have insufficient supplies to meet the essential water demands of a community). Essential water demands are those relating to the health and safety of the community (i.e. adequate supply for drinking, basic hygiene, and maintaining essential services, such as hospitals and electricity generation).

3.1 Water supply sources

Each water supply source used to meet urban water demand (including contingency and emergency water supply sources) should be clearly and accurately described.

The description should include full storage and minimum operating volumes, the operating rules for the supply system (including any water restriction regime implemented by Council), and the total volume of water entitlements drawing (or able to be drawn) from the system and the conditions under which water extraction is permitted. Additionally, storage curves (which show water volumes and storage surface area associated with water depth) may be required for surface water storages. The above details are essential for understanding how the system is (or can be) used and for what purposes, and these factors provide essential inputs to any hydrologic modelling undertaken.

The actual and modelled historical behaviour of the supply system assists the understanding of how the system performs under actual and modelled demands under past (historical) climatic conditions. In some cases, stochastic assessments involving multiple replicates of longer-duration generated sequences will be undertaken to develop a better understanding of vulnerability to climate variability.

The assessment of the performance of water supply sources should include the conjunctive operation (incorporating system operating rules) with seamless transition to the use of contingency and emergency supply sources. Understanding the capacity and suitability of the water treatment and distribution systems aids in the consideration of the ability to maintain continuity of supply and assessment of the suitability of planned contingency and emergency supplies, as well as the ability of the current system to cope with projected increases in demand.

Information on the age, condition and capacity of the physical assets associated with any storages (e.g. dams, weirs, bores, pumping stations, water treatment plants, pipelines) helps to identify potential risks to continuity of supply as well as potential avenues for improvement.

Much of the above information can be obtained from readily available reference documents — e.g. water plans and associated implementation systems (water management protocols, resource operations licences, water supply scheme operations manuals) established under the *Water Act 2000*; drinking water quality management plans required under the *Water Supply (Safety and Reliability) Act 2008*, and online gauging station data. Councils / WSPs should hold more detailed information on the historical performance of, and issues with, their local supply systems. Councils are also best placed to advise on their contingency and emergency supply strategies, and may have updated storage curve data, and will often be aware of matters that should be considered but are not public knowledge (such as planned changes to, or issues with, the supply or treatment and distribution system). It is therefore imperative that active engagement and discussion occurs to obtain a comprehensive and complete understanding of the water supply system, including the water treatment and distribution system, and existing and potential contingency and emergency supply sources.

3.2 Current water use and demand

UWSAs include consideration of the needs of all users of a water supply source which, in multi-user systems, will often include agricultural and industrial users outside of the urban area. To assess an urban community's assured water supply security, it will usually be assumed that non-urban water users extract their full entitlement (subject to any entitlement conditions and water sharing arrangements outlined in the department's statutory catchment Water Plan framework). The focus of any supply and demand water balance assessment undertaken using hydrologic modelling is then the performance of the supply system under a range of potential community water demands, including demands achieved during drought response.

Analysis of the community's current water uses and water demands helps to identify whether water is being used efficiently and where savings or reductions in demand may be achieved. This analysis includes identification of losses, non-revenue water, 'discretionary' water use (e.g. outdoor uses such as watering gardens and filling swimming pools), and a breakdown of use into the categories of residential and non-residential (commercial, municipal and industrial). It also includes the identification of major individual users of urban water such as significant local industries connected to the urban supply (e.g. abattoirs, canneries, factories).

Hydrologic modelling informs on the extent to which water supply security is enhanced by reducing demands. Improved supply system security, reductions in cost, and commitment to improved sustainability outcomes are the main reasons for pursuing demand reductions through more efficient water use.

Comparisons of historical water demands with concurrent rainfall aids understanding of water use patterns during normal, wet and drought conditions. It is important to understand whether demands are responsive to the application of water restrictions. The input of estimated or actual demands during prolonged droughts into hydrologic modelling will be an important consideration when assessing security of supply.

Assessing historical water demands, and deriving per capita demands for future water supply planning, aid the understanding of the likely pressures on the supply system moving forward and the level of flexibility that may exist in terms of demand management opportunities (e.g. savings that may be achieved through water restrictions or advertising campaigns during times of low water levels). This information also provides insight into the likely duration of continued supply that may be achieved without further inflows into the system, starting from any particular storage level.

The value of the above analyses is necessarily dependent on the level of detail and accuracy of the water use data that is available. Council is relied upon to ensure the quality of the water use data.

3.3 Projected future population and water demands

In UWSAs, projections of future water demand include consideration of both urban and non-urban demands on the water supply system. For non-urban demands, planned or potential changes to industry, mining and agricultural water demand which have the potential to impact urban supplies are assessed, along with available supplies (including water entitlements and the potential release of water reserves).

For urban centres, population growth is generally the major driver of increases in water demand. Population census records and projections are integral to understanding historical and potential future water demands in terms of total and per capita volumetric terms. Having derived appropriate per capita demand projections (based on historical population data), population growth projections can be used to calculate projected total average annual demand levels moving forward.

Population projections in UWSAs are generally for a planning horizon of around 30 years (currently to around 2050) and are developed following consideration of population projections produced by the Queensland Government Statistician's Office (QGSO) and local level assessments of likely changes. While the QGSO population projections are a reliable information source, councils will often have developed their own projections which may include consideration of proposed new developments or other matters not taken into account in the QGSO projections. Discussion and agreement with councils is therefore required to develop an appropriate population projection (or in some cases, alternative trendline projections) for the relevant community.

For determining typical or average water demands, the focus is generally on the population that has historically been or is projected to be connected to (i.e. serviced by) the reticulation network. However, during periods of extended drought there can be significant additional demand placed on the system via supplies provided to the non-serviced population (e.g. rural or rural-residential properties), for example through stand-pipes and water carting operations. Therefore, the potential impact of water demand from the non-serviced population does need to be considered in assessing potential future demands, particularly during drier periods. The impacts of demands during extended droughts on water security also need to be considered.

Future water demands may also be impacted positively or negatively by other factors including, for example, improved water-use efficiencies, community education, or impacts from climate change. Planning for meeting future demands needs to take into consideration the range of demands (during wet and dry periods) that may be experienced, the impact of business closures and start-ups, as well as the range of demand management strategies that could realistically be effectively implemented.

3.4 Climate change impacts

For most of Queensland, climate change impacts under a high emissions scenario (Representative Concentration Pathway (RCP) 8.5), are projected to include increased temperature, increased evaporation, and decreased (less frequent but more intense) rainfall (with impacts projected for 2030 through to at least 2070). These factors are likely to impact both water demand and water supply. On the demand side of the equation, hotter drier conditions are likely to result in increased outdoor water use (e.g. watering gardens; topping up swimming pools) and increased indoor use (e.g. evaporative air conditioners; more frequent showers). Concurrently, on the supply side, rainfall impacts on water capture in storages are more uncertain but increased evaporation will have the effect of reducing runoff and streamflow and impact how long storages last without further inflows. (In Queensland, evaporation alone currently accounts for a reduction of around 1–3 metres water depth per year in storages, depending on the evaporation rate associated with the geographic location/climate).

While projections for the impacts of climate change are available down to the scale of Local Government Areas (LGAs) for Queensland (https://longpaddock.qld.gov.au/qld-future-climate/dashboard/), there is still a considerable range in the outputs provided by the various models used for this purpose, and ‘micro-climate regions’ often exist within these broader LGAs (meaning the specific impacts of climate change will vary across the LGA). Climate change models are continuously being improved and refined, and our knowledge of the likely specific impacts on an area improves over time as these models are further developed and refined.

The current projections are the best available basis for understanding the direction, extent and range of climate change likely for a particular area, and can be used to guide assessment and response to projected local impacts on water supply and water demand. Anticipating these changes is a fundamental part of water supply planning and assessment.

Council local knowledge can contribute significantly to the overall understanding of the water supply security moving forward including valuable information on impacts already being experienced within their community or supply system.

3.5 Hydrologic modelling and assessment

Hydrologic modelling is undertaken to simulate the performance of a community’s water supply system and the capability of the system to meet current and projected future water demands under various climatic conditions and/or operational scenarios, and at various demand levels over time.

The type of hydrologic modelling and assessment that is undertaken depends on a range of factors, including the:

- size of the community being assessed
- potential consequences of supply shortages
- complexity of the system and the dependency on climate dependent supplies
- ease of drought response
- availability and quality of data for input into the modelling, and
- accuracy and usefulness of results likely to be obtained (among other considerations).

Hydrologic assessment techniques include analysis of historical records, calculation of storage depletion times, and complex modelling utilising records of historical climate, statistical techniques to analyse climate variability, and quantification of the water security risks posed by climate change. Complex hydrologic modelling is generally undertaken by the Department of Environment and Science (DES) using one of two computer programs — either IQQM (Integrated Quantity and Quality Model) or the Source model (developed and maintained by eWater Limited).

Key inputs to the hydrologic models include:

- climatic patterns (particularly rainfall), evaporation rates and other losses, and rainfall/runoff relationships
- details of storages (e.g. dams, weirs, off-stream storages, etc.)
- operational rules (e.g. minimum operating levels, cut-off rules, water sharing arrangements, environmental release requirements, streamflow conditions, flow routing etc.)
- water entitlements authorising extraction from the system, including historical levels of extraction (where available) and licence conditions
- demand patterns, and
- demand management strategies such as water restrictions (e.g., at various dam/weir water levels).

It is important that the model simulates as far as reasonably possible the performance of the supply system, especially for drier times when less water is available. Well calibrated models assist in making judgements about likely changes in behaviour and the quantum of changes associated with improved supply and operational strategies under historical and climate change scenarios.

The modelling provides indication of the likely performance of a water supply by assessing the likely frequency, severity and duration of supply shortfalls under various potential future climatic conditions, water demands, and water restrictions. Models should never be assumed to provide accurate forecasts – rather they should be used to build a better understanding of likely behaviour.

Models are calibrated against historical performance. The quality of calibration depends largely on the availability of accurate, detailed records over an extended period of time and will depend on what one is trying to achieve through the modelling, e.g., average performance or performance during deep droughts. Council’s assistance in providing accurate and complete information is therefore critical to this process.

The hydrologic models are generally first calibrated and then validated using known demands and hydrologic performance data. This can then be used to reflect how the system would have performed (assuming certain demands and other factors) for the period of available historical records for rainfall (usually about 125 years) and streamflow (generally available for a lesser period, often around 50–70 years). Where data is missing it is generally interpolated from the other available data (e.g. early streamflow records may be interpolated from later streamflow and rainfall/run-off records). This modelling is referred to as ‘historical modelling’.

‘Stochastic modelling’ will generally be undertaken when the consequences of supply shortfalls are high – generally the higher population centres. Stochastic modelling involves generating much longer data sequences which incorporate key statistical indicators from the historical record. For the UWSAs, this will often involve generating 100 replicates of 10 000 years of stochastic rainfall, evaporation and streamflow data for a catchment area. Stochastic methodology intends to capture the climate variability that may not have been captured in the historical data sequence due to the typical short lengths of historic record available. This modelling can provide a strong indication of the likely frequency, duration and severity of events (such as supply shortfalls) that have occurred only rarely (or not at all) during the historical period. This modelling can also be used to provide an indication of the degree of variability (uncertainty) in supply performance that may occur as a result of climatic variability.

However, when considering the model’s ability to appropriately represent the supply system’s future performance, a range of factors come into play. For example, it is important to note that historical performance is not necessarily an accurate indicator of future performance, which will be impacted by both climate variability and climate change, among other things such as land clearing, changes in irrigation demands and seasonality, and industrial development within the catchment.

Stochastic modelling, based on synthetically generated sequences developed from historical records and assuming the same statistical characteristics as the historical record, incorporates the impacts of climate variability.

Currently, modelling the impacts of climate change on water supply security is based on climate change adjustments to the historical record. This technique employs specific changes to modelled climatic conditions (e.g. overlaying projected annual and seasonal rainfall changes across historical rainfall and run-off patterns). This methodology assumes the rainfall–runoff relationships established in the calibration to be true for the climate adjusted data, which may not hold true under prolonged drought conditions, or where significant land use change has occurred.

Each Council accesses water from sources with unique hydrologic characteristics and distributes water to customers through infrastructure that is also unique. It is therefore important that the likely impacts of climate change are considered on a case-by-case basis for each catchment and community.

3.6 Storage depletion projections

Specifically developed storage depletion projections can be used to project the likely duration of a supply based on a particular starting point (e.g. particular level in a dam on a set date) and a particular level of water demand, taking into account evaporation and other losses and assuming no further (or minimum) inflows. Such projections are generally used to understand storage behaviour in a drought situation, and to understand times available for implementation of drought response measures.

3.7 Drought response

Water service providers should have a drought response strategy for every community.

Wherever possible, a community should have sufficient water to support its well-being. However, for some communities it may not be possible economically to have a strategy which guarantees this volume of water. This will usually be in large communities with shorter duration supplies where there is insufficient time to build a new supply in response to a drought and providing sufficient supply to guarantee never running out of water is not economical. This will be the situation for some large inland centres and coastal communities (who may increasingly adopt desalination as a solution).

In such communities, the strategy needs to be the highest practical and affordable security of supply, minimising the likelihood that the community will run out of water to meet essential demands. Essential water demand is the volume of water necessary to provide for drinking and basic hygiene and for essential services such as power generation, health and safety needs.

Well-developed strategies involving community engagement and awareness, demand management and restrictions and contingency and emergency supply measures need to be put in place. Carting is a practical and economical solution for many small communities. If it is not practical to plan for essential water demands always being met then the council should ensure water for drinking can always be maintained, resorting to bottled water in the most extreme circumstances (rarely, if ever, experienced in Queensland) and reliance on poorer quality water for non-drinking water purposes such as sanitation.

3.8 Demand reduction and leakage losses

Ensuring efficiencies in water use can lead to significant cost-savings for councils and the community, and it is often the case that the cheapest solutions for meeting increased water demands involve demand management and reduction of leakage losses.

A detailed analysis and breakdown of water-use for a community (water demand profiling) can help to identify areas where savings may be achieved through loss reduction and/or demand management practices (e.g. community education, water restrictions, and tiered tariff systems — including those based on storage levels and not only based on usage). When potential water savings are identified and compared against the costs of supplying the same volume as additional demand, the true costs of water management options are more easily discerned. Additionally, this knowledge may sometimes enable an extension of the drawdown timelines for existing supplies and enabling deferral of new capital works to meet growing water demands. Such an outcome could result in significant cost savings while also increasing supply security.

Most councils would already have an efficient water restrictions regime which includes permanent water conservation measures targeted at limiting the usual day-to-day water use in the community, in addition to restriction levels generally linked to water supply storage levels with associated targeted reductions in water use. Data identifying the periods during which restrictions have been imposed (and the restriction levels) combined with water use data for the same period can enable assessment of the effectiveness of the restrictions being implemented.

As part of the UWSA process, the department works with councils to understand their community's water demand profile. This will enable a more comprehensive and detailed understanding of water demands for the community and the potential scope for improved water-use efficiencies and cost savings. The extent to which a water demand profile can be developed will depend in part on the availability and accuracy of council's water use data, as well as the extent to which council has already undertaken this type of analysis. However, this profiling will also enable comparison of the community's water use efficiency against comparable communities, to help guide demand management choices. Council will therefore be relied upon to provide information regarding any work already undertaken in this area and, where available, to provide detailed water use (and water production) records, and to engage in and discuss the analysis and interpretation of that data.

3.9 Contingency and emergency supplies

Contingency and/or emergency water supplies are, basically, additional water supplies that might be required to ensure that water demands can continue to be met when the community's usual supply sources are not available for some reason (e.g. due to extended drought, or infrastructure failure).

Contingency/emergency supply planning can significantly reduce the likelihood of a community running out of water. The adequacy of a contingency/emergency supply is determined partly by:

- the cost and complexity of accessing the supply
- the time available to access the supply compared to the timeframe for the drawdown of the usual supply source (i.e. can it be accessed in time?)
- the volume and rate that can be reliably supplied.

If contingency/emergency supply (or documented planning) is inadequate, not available, or unknown, this increases the likelihood of an event adversely impacting water security. It is therefore imperative that councils/WSPs have appropriate plans in place which are well documented and include realistic triggers for implementation.

Supply capacity limitations can increase the likelihood of an event adversely impacting water security or supply continuity. The provider should consider their financial capacity in planning for water security and outline this in associated planning documentation. When undertaking planning the provider should consider balancing the costs and benefits of actions and the needs and wants of the community.

In recognition of the importance of this planning, part of the UWSA process is ensuring that, in conjunction with council, the following steps have been (or are) undertaken:

- identify existing and potential contingency/emergency supply sources of surface water and groundwater in the area
- describe the adequacy of any contingency supply with respect to rate of supply and period of time likely to be available

- determine for any contingency source identified if there would be any modifications required to the existing water treatment plant
- identify the timing and triggers for actions to implement contingency/emergency supplies (including approvals/licences, etc.)
- determine what action needs to be undertaken if there is no existing or readily available potential contingency supply source.

3.10 Risk evaluation

The assessment process outlined above helps to identify the water supply risks faced by communities. However, 'risk evaluation' further defines those water supply risks in terms of their potential impacts on the community (including business and industry), the council and the State. Where the timely provision of contingency supplies is not possible, the WSP needs to seek to identify and provide supplies with tolerable risks of supply shortages.

The purpose of the risk evaluation process is to further inform the subsequent planning process and decision-making, including actions to be taken by the Urban Water Security Planning section of DRDMW and by the WSP. The process of risk evaluation may therefore include preliminary cost-benefit analysis of the various options to effectively deal with or mitigate the risks, including the option of doing nothing.

The risk evaluation process will generally commence before the finalisation of the UWSA document but will not necessarily be completed before the UWSA is published. Therefore, while early analysis from the risk evaluation process may inform statements within the UWSA document about the risks and future actions, the risk evaluation process and actions required to improve the risk situation may continue beyond the publication of the UWSA. DRDMW will provide a clear position on their perspective of the risks and minimum actions required in the UWSA document, after taking into consideration the results of both the risk assessment and preliminary findings from the risk evaluation processes. It is anticipated that this risk awareness would also influence how councils develop their 'Moving Forward' section at the end of the UWSA document (see Section 3.12).

The risk evaluation process can help to inform a whole-of-government approach to dealing with council's needs and, potentially, funding requests. Further information on risks can be found on the Department's website at Managing water supply risk | Business Queensland, and on the page at Water service provider investigations | Business Queensland and subsequent pages.

3.11 Planning and potential solutions for water security issues

Many councils will face new water security issues from a range of factors including geographic location, impacts of climate change, population growth and associated increased demands, changes to desired level of service objectives, financial capacity, and aging infrastructure, among others. One of the ways in which the state government aims to support WSPs to deliver safe and reliable water services is through the provision of guidance materials to assist service providers meet their obligations and plan for the future—the recent development of the department's '*Water supply planning: Guideline for water service providers*' and guidelines on '*Drought management plans and water restrictions: Guideline for development*', among other available guidelines, are designed to assist service providers in this way.

While meeting urban water demand remains the responsibility of the respective registered WSP, DRDMW can collaboratively assist service providers with identifying potential options and solutions for existing or emerging water security issues, understanding potential funding options, and ensuring adequate planning for an appropriate path forward. DRDMW also have regulatory processes designed to ensure that adequate planning does occur. The partnering process throughout the development of the UWSA ensures that a strong and shared understanding of the water security issues is held by both the WSP and DRDMW, which optimises the potential for collaboratively resolving the more difficult issues and benefits all parties.

Through the process of engaging with council throughout the water supply security assessment, DRDMW aims to build a strong and positive working relationship with councils that will assist both parties in ensuring appropriate water supply security is maintained for Queensland communities moving forward.

3.12 Moving Forward section

The Moving Forward section of the UWSA document is generally a single page written by the relevant council (assisted by DRDMW if required) which states how council will manage the water supply into the future, including what actions they intend to take to maintain or improve water security, given the information gained from the assessment process.

This section represents a commitment by the council to their community and may also include anticipated community engagement activities (such as Water-wise education or raising community awareness of various water security matters). DRDMW will usually contact council periodically following publication of the UWSA to see how council is progressing with their planned actions.

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