

Fixed Standpipe Review

Issues Paper





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1. Abbreviations and Definitions

Abbreviation	Definition
MCF	Major Consumer Framework
WC	Water Corporation
Fixed Standpipe / standpipe	A metered service which provides access to bulk water supplies directly from a point on a water supply main
LGAs Local Government Authorities	Includes Shires, Local councils and Local Governments
DFES	Department of Fire and Emergency Services
AMI	Advanced Metering Infrastructure (also known as 'smart water meters')
Concession	A discount provided on the charges applicable where conditions are met by the customer.



2. Executive Summary

Fixed standpipes provide an essential source of water for the Western Australian community where customers are remote from reticulated water schemes. They enable local governments to maintain street trees and undertake minor building activities, and facilitate economic growth, by supplying businesses that rely on carted water as an input to production.

Driven by customer and staff feedback on issues associated with fixed standpipes, Water Corporation commenced a review in early 2017 to collate corporate knowledge of fixed standpipes, and critically analyse all aspects of the management process. This included receipt and processing of applications, application of land use ratings, infrastructure installed at the point of distribution, pricing and the policy governing use of fixed standpipes.

The table below summarises the issues identified and possible solutions to resolve them. All impacted stakeholders are invited to review this paper and provide feedback, which will help to design a better process for managing fixed standpipes.

Issue	Possible Solution
Some commercial customers access community purpose standpipes and pay concessionary rates; this creates inequity and results in the community and state government subsidising the activities of private enterprises on an unequal basis.	Set fixed standpipe consumption fees at the commercial rate and design a supporting process to enable eligible customers to claim a concessionary rate where appropriate.
	Oblige all fixed standpipes customers to install standardised infrastructure which enables differential pricing to enable multi users to access the same standpipe but pay the appropriate rate.
Scheme pressure and supply issues caused by standpipe being used for undesignated purpose (i.e. commercial user accessing community purpose standpipe).	Equip all standpipe meters with automatic metering infrastructure (AMI) to monitor usage (demand and pressure) and bill all standpipe consumption.
	Restrict standpipe flow rates – low flow rates for community purpose standpipes, high flow rates for commercial standpipes.
Lack of publically available information about standpipes, how they work, where they are located, the permitted scope of use for a given standpipe, and what pricing applies.	Once changes are made to the management of standpipes, develop a Fixed Standpipe User and Pricing Policy and Guidelines on how to use standpipes (where they are located, what they should be used for and by whom, how to gain approval to use, and potential ramifications of misuse.) Links to these documents will be made available on the Water Corporation website.

Feedback provided in response to this paper will be used to change the existing management process to meet customers' expectations. Water Corporation will ensure any changes are communicated to stakeholders in advance and provide adequate time to adjust to any changes.



3. Introduction

Water is our most precious resource. It is vital to the sustainability, growth and prosperity of every community across Western Australia. Our role in looking after this vital resource is at the heart of everything we do and defines our core purpose- Sustainable management of water service to make WA a great place to live and invest.

We understand the importance of engaging with and listening to our customers and the broader communities they represent. We also know they rely on us to deliver and maintain the products and service they expect.

Based on customer and employee feedback we have identified an opportunity to review and improve the way we manage Fixed Standpipes to deliver a consistent and satisfactory customer experience.

This paper summarises the information gathered, issues identified and outlines the Water Corporation's position on these matters. In recognition of the importance of fixed standpipes to the community, this paper describes the attributes of an improved future state and suggestion options for addressing the issues identified whilst remaining open to suggestions from the community on ways to improve the service.

All impacted stakeholders are invited to review this paper and provide feedback on the issues and help to design a better process for managing fixed standpipes. Not all standpipe owners will be impacted by the issues in this paper. Feedback provided in response to this paper will be used to change the existing management process to meet customers' expectations.

4. Background

A fixed standpipe is a metered service which provides access to bulk water supplies directly from point on a water supply main. The majority of fixed standpipe services are located in country regions, although there are a small number in the metropolitan area. Standpipes may be owned by Water Corporation, Local Government Authorities (LGAs), government departments, privately or by the Department of Fire and Emergency Services. In few instances a fixed standpipe is connected to non-potable water, for example a borefield transfer main prior to water treatment.

Fixed Standpipes provide an essential source of water for people in communities who are remote from reticulated water schemes and may otherwise have limited or no water for household purposes, firefighting or to supplement water for stock. Businesses remote from a reticulated water supply rely on water carted from fixed standpipes to provide essential input to their business for production or for staff amenity. LGA's utilise standpipe water to maintain street trees, ongoing minor road construction and other building activities.

A standpipe service is different to a temporary service that is provided for short term land development, building or road construction. Temporary Services are used when the service is required for a period less than 2 years and is then removed. Additionally, portable hydrant standpipes used only in the metropolitan area are not included in the scope of this review.

Driven by customer and staff feedback on issues associated with fixed standpipes, a review commenced in early 2017 to collate corporate knowledge of fixed standpipes and critically analyse all aspects of the management process including receipt and processing of applications, application of land use ratings, infrastructure installed at the point of distribution, pricing and the policy governing use of fixed standpipes.

This paper is the outcome of the review and documents the findings, initial options for addressing the issues and seeks to gather further input from affected stakeholders via a consultation process.



4.1 Ownership distribution

There are approximately 601 standpipes across the State.

Table 1: Number and type of fixed standpipes issued by Water Corporation in WA

Owner	Type 1	Types 2 and 3	TOTAL
Local government (shires and councils)	430	98	528
Commercial operators	1	24	25
Government departments	1	10	11
Water Corporation	0	28	28
TOTAL	441	160	601

5. Project Drivers

Any changes to the management of fixed standpipes will aim to deliver the following benefits:

Benefits to the customer

- Consistent terms, conditions and levels of service for standpipes across the State
- Consistent payment method for use of standpipes across regions
- Enhanced customer experience as the standpipes will be used for their intended purpose.
- Reduce burden on LGAs who often find management of standpipes costly, contentious and onerous.

Benefits to the Corporation

- Reduced number of customer enquiries and complaints relating to the use of standpipes in regional areas.
- Consistent levels of service across the State
- Transparent pricing, reflective of the cost to deliver the Water Corporation to deliver the service.
- Encourage the consideration of non-potable source alternatives
- Ensure appropriate tariffs being applied to all commercial customers which will improve equity and fairness.
- Address Operating Subsidy gap between the cost of supply and LGA tariff recovery where LGA standpipes are being used for non-LGA purposes (or water retailing by the LGA).
- Manage competing interests for water during times of short supply.
- Address operational issues caused by standpipes, such as:
 - pipe burst from water hammer based on valves being used, and
 - flow & pressure issues to surrounding customers by excessive usage
- Consistency in infrastructure and technology to streamline processes



6. Current situation and Issues

6.1 Pricing structure

The regulated fees and charges imposed by Water Corporation associated with owning and operating a fixed standpipe are summarised in table 1. In some instances, for example where non-potable water is delivered via a standpipe or over 49 kilolitres per day is required, pricing is subject the terms and conditions of a special agreement and the Table 1 regulated charges do not apply. The charges are levied on the person or entity registered as the customer to use the standpipe. In many instances, standpipe customers on-sell water to third parties. This can include a margin to cover costs and any expenses involved in operating and administering the fixed standpipe. Some customers have advised that they on-sell the water to support local businesses through service provision, rather than to generate revenue.

The 'set and forget' nature of the current regulated pricing structure does not provide flexibility to meet the changing needs of the community. What was relevant to customers at the time of application often changes over time and has led to standpipes not being used for the intended purpose.

For example, the Corporation is aware of type 1) 'Drought proofing' and type 2) 'Shire use' fixed standpipes with the associated concessionary pricing being used by commercial customers.

Concessionary rates aim to enable access to subsidised water for community purposes, irrespective of the location or climatic conditions. On selling for commercial purposes sometimes at highly inflated prices contravenes the intent of providing a subsidised service.

Type 1 and 2 standpipes are not intended or designed to meet the needs of all customers (such as mining companies wanting water for dust suppression, or road construction companies needing high flow rates to fill tankers) nor is it appropriate for a commercial business to be charged a community concession rates for the water taken from these standpipes for commercial benefit.

This unintended commercial use has created an 'anti-competitive' disadvantage for those customers who are connected to the scheme and are paying the non-residential tariff or who apply for a dedicated commercial standpipe service and pay the associated higher charges. There is then an inequity for some commercial customers and results in the community and state government subsidising the activities of private enterprises on an unequal basis.

Additionally, standpipe services made available to LGA's do not attract infrastructure contribution charges. These are charges levied on customers increasing demand on the scheme and contribute towards the cost of the headworks (treatment plants, pumping stations etc.) required to make that service available. When the LGA on-sells standpipe water to a third party the costs of providing that service have not been recovered.



Table 2: Fixed standpipes types and charges

Type	Name	Description / Users
1	LA Standpipe (4022)	<p>A standpipe owned and managed by a Shire to provide a 'drought proofing' service to customers with no access to scheme water, for example topping up customer rainwater tanks for supplementing domestic supplies. Limited use by Shires for their own purposes.</p> <p>Service Charges: Standard Service Charge equivalent to a 20mm service or residential charge \$250.39 (2017/18)</p> <p>Water Use Charges: Farmlands tariff: \$2.391 per kilolitre (2017/18)</p>
2	Standpipe (4020)	<p>A standpipe that is owned and managed by a Shire exclusively for their purposes and use, such as watering plants, minor roadworks, fire-fighting purposes (standpipe will be unlocked).</p> <p>Service Charges: No Fee: 100% discount on Service Charge</p> <p>Water Use Charges: Commercial Class 1 tariff: \$2.391 per kilolitre (2017/18)</p>
3	Standpipe (4020)	<p>A standpipe may be owned by Shire or installed directly on a customer site. For use by commercial customers, predominately road contractors, commercial operations or privately operated standpipes.</p> <p>Service Charges: Charge based on size of the meter.</p> <p>Water Use Charges: Commercial (appropriate class for that town) charges ranging from \$2.391 cents to \$7.880 per kL (2017/18).</p>
4	Fire Standpipe (4025)	<p>Applications may be submitted by Councils or DFES on behalf of volunteer fire services. Used only for fire drills or fire-fighting. DFES is also entitled to draw water for fire-fighting purposes. If standpipe is locked the keys are held with the volunteer fire service. If standpipe is unlocked it is treated as a normal standpipe (4020) and use is unrestricted.</p> <p>Service Charges: No Fee: 100% discount on Service Charge</p> <p>Water Use Charges: No Fee.</p>
5	Water Corporation Standpipe	<p>A standpipe that may be coin-operated by a customer), a multi-user standpipe services, or padlocked with a water use logbook.</p> <p>Service Charges \$0.</p> <p>Water Use ranges \$4/kL to \$10/kL.</p>



6.2 On selling water from standpipes

From 1984 to 2005, a single concessionary charge was applied to all standpipe users, irrespective of the location, the meter size or the volume of water used. This 'flat fee' tariff structure required the standpipe customer to apply the same tariff to the on-selling of water to others. For example, a LGAs was able own the fixed standpipe and on-sell to a water carter, but only at the fixed flat. This prevented the LGA from charging on-costs and making profit from the fixed standpipe.

From 2005 onwards, some standpipe owners on-sold water at a price that covers costs and any expenses involved in operating and administering the fixed standpipe. Currently fixed standpipe owners on-sell water at varying rates across the state and users access water a different rates depending on the location.

6.3 Application Process

Application for a fixed standpipe can be made online through the Water Corporation's BuilderNet portal or via the Development Services team.

Requests for standpipes are assessed individually and charged according to who applies for the service and the intended purpose of use. The information provided at the time of application is assessed to determine which standpipe type and charge is applicable to the described intended use.

If the application meets terms of the Major Consumer Framework (MCF) the prices referred to in Table 1 are not applicable. If a customer makes an application for a standpipe and through increased need for water the demand meets the terms of the MCF in the future, it is very difficult to retrospectively address the incorrect pricing.

Once the application is approved by Water Corporation and the relevant fees are paid, a meter is installed at the agreed location. The customer is then responsible for installation of any additional infrastructure at the site to meet their needs, such as a tank, overhead pipe for truck filling and a charging mechanism (e.g. coin operated, swipe card, honesty log book, credit card).

In all cases the standpipe customer is responsible for the maintenance of the fixed standpipe asset and prevention of any illegal water use. Water Corporation provides a standardised drawing (EG20-12-2) that shows the configuration for a standpipe, including a gate valve on the customer's side of the meter. There is however no mechanism to ensure the customer complies with the standard. All infrastructure downstream of the gate valve is not standardised or regulated by Water Corporation.

The Water Corporation does not specify the type of infrastructure to be installed after the meter or provide clear guidance on what the water can be used for.

6.4 Billing process

Water Corporation reads fixed standpipe meters every second month and charges the customer for use at the prescribed water use charge. Standpipes priced under the MCF are read weekly (often via AMI) and billed between 1-weekly and 8-weekly depending on the agreement and financial risk of the customer.

A credit is provided to Shire's for water taken for the purposes of firefighting under Standard 314, Section 9.2 Fire Brigade and Emergency Services rights to water.



6.5 Infrastructure inconsistency

There is no consistent physical description of the different standpipe types as the infrastructure installed varies based on the customer's needs and budgets. Examples of types are below:

- Standpipe banks: a row of lockable standpipe meters installed in parallel, liked to overhead filling stations. See figure 1, 2 and 3 in Appendices.
- Privately owned within private property boundaries may be a meter with a tap or something more sophisticated.
- Four fixed standpipes owned by Water Corporation are coin-operated. See figures 8, 9 and 10. Issues associated with coin operated standpipes are:
 - Spare parts are generally difficult to source.
 - The coin mechanism gets jammed and repairs can be delayed by availability of staff and resources.
 - There are a number of costs and problems associated with banking the coins.
 - Theft – breaking in to the mechanism and stealing the coins.
 - The standpipes get damaged or have occasions of people stealing hoses or fittings.
 - Expertise from electrical trades staff is required to calibrate the standpipe timer annually.
 - Customers complain that they receive less water from the smaller hoses (because the controllers are all timer-based on the main high-flow hose and so 1 unit interval supplies less water through the smaller hose diameter).
 - We are unable to differentiate between customer types which we may want to charge different volumetric charges

A recent project was undertaken requiring all standpipe customers to install Backflow Prevention Devices on standpipes. This is mostly complete.

Some LGAs have retrofitted commercial multi-user transaction systems to their LGA-tariff standpipes, and some of the valves are thought to be responsible for water-hammer pipe bursts (given they are being turned on/off frequently).

6.6 Scheme demand and pressure

Use of a fixed standpipe for an unintended purpose can cause pressure and supply issues across a whole scheme. This can impact those customers connected to the scheme who have service priority.

An example of this occurred in December 2015 one of the Water Corporation's dam began emptying faster than it could fill. Investigations revealed a commercial operator had been drawing over large quantities from the LGA standpipe and carting it to be used for road building purposes.

The Water Corporation and the LGA were both unaware of this occurrence. The Corporation subsequently suspended the use of the standpipe service for 3 days to recover dam levels. This resulted in challenges for all parties involved.

Water hammer is also a common occurrence as a result of high flow fixed standpipes being shut off quickly. This can cause a fast build-up of water pressure within the pipeline and over time damage the pipeline, it also impacts customers on the same pipeline resulting in noise complaints.

Water Corporation infrastructure is subject to damage and becoming inoperable during fire and other emergencies. Therefore, Water Corporation does not guarantee water will be available via fixed



standpipes for firefighting purposes and encourages the consideration of other sources as a primary emergency response.

6.7 Technology

Various payment technology solutions utilise a controller which allows pre-paid cards, debit cards or credit cards to be used to access water from standpipes. Controllers can be programmed to integrate various pricing levels to cater for a water charge that differs from the original application for a service.

Water Corporation has investigated the use of these to replace coin operated mechanisms. There are currently issues with communications between our financial institution, billing system and the card reader therefore preventing payment processing. This remains an option for investigation in the future.



7. Solution Ideas

Resolution of the issues identified in this paper requires a joint approach from customers, Water Corporation and affected stakeholders. In recognition of the importance of fixed standpipes to the community broad consultation is planned. Limited solution design has been undertaken to ensure a broad offering of options during this initial consultation phase.

Table 3 describes the desired features of a future state solution to the issues identified. Using these attributes, specific options are identified in this section although evaluation of these options will only be undertaken once stakeholder feedback has been provided.

Table 3: Attributes of the desired ‘future state’ of fixed standpipe management

#	The solution should
1	Meet the current and changing needs of the customer and end consumer.
2	Be easy to implement, understand and be consistently applied.
3	Clearly articulate what fixed standpipes can and can't be used for.
4	Enable differential pricing (charges based on customer type) and multidimensional payment (different payment methods i.e. credit card, BPay, EFTPOS, Swipe card) based on user type.
5	Recognise that locations with no cell phone tower access will not allow automatic meter reading via AMI.
6	Enable Water Corporation to review and monitor the appropriate rating for customers on a regular basis.
7	Be able to capture necessary customer information in order to apply the correct rating.
8	Be compatible with the Water Corporation's billing system.
9	Enable the Corporation to serve all large scale 'non-regulated' customer needs directly, and provide for an equitable and administratively efficient framework where smaller-scale customers take water from an LGA standpipe and the appropriate tariff is applied.
10	Provide Water Corporation with a view of who is drawing water from fixed standpipes (i.e. the end user), regardless of the registered customer.
11	Standardise service point design for future customers and possibly review existing design.
12	Enable remote control of fixed standpipe flow rates by the Water Corporation.
13	Accommodate Firefighting requirements, being that high-flow rates are required for operational reasons and the charge of water for fire use is per legislation / policy
14	Remove coin-operated Standpipes.
15	Be enforceable and approved by the Minister.
16	Ensure that use of standpipes does not compromise capacity and capability to supply the broader customer base, nor cause damage to our infrastructure.



7.1 Possible Pricing and Infrastructure solutions

The list below describes high level solutions to some of the issues identified in this paper. It is not a definitive list and solutions should be considered on an individual basis. Feedback from stakeholders will be used to evaluate these options and develop other solutions not yet defined.

- 7.1.1 Set all regulated fixed standpipe consumption charges to the commercial rate and design a supporting process to enable eligible customers to claim a concessionary rate as appropriate. Examples of concessionary rate applications could be LGA tree watering, emergency supplies for households not connected to scheme and firefighting.
- 7.1.2 All 'community purpose' standpipe services become restricted to a 20mm meter size with flows limited to 20 litres per minute. Standpipes with a meter size greater than 20mm are charged at commercial rates based on rate of flow, as commercial users generally require greater volumes to be accessed quickly to fill large tankers.
- 7.1.3 Oblige all fixed standpipes customers with the ability to on-sell water to install standardised infrastructure which enables differential pricing. This would eliminate the need for flow restriction (as mentioned in item 7.1.2 above) and achieve pricing equity across users.
- 7.1.4 Use automatic metering infrastructure (AMI) to monitor and bill all standpipe consumption (may be restricted to 'drive by' collection rather than remote reading in some locations due to lack of cell tower coverage). This would eliminate issues with coin operated devices and enable monitoring of demand to protect supplies.
- 7.1.5 Develop and provide reference material for people seeking information on standpipes, such as a Fixed Standpipe User and Pricing Policy and Guidelines on how to use standpipes, where they are located and what they should be used for and by whom, how to gain approval to use and potential ramifications of misuse.

7.2 Stakeholder communication

Stakeholders identified as impacted by the management of fixed standpipes are listed below:

Water Corporation stakeholders

- Development Services
- Corporate Business Development
- Customer Billing and Assurance
- Pricing and Evaluation
- Regional Managers, Stakeholder Managers.
- Service Delivery / Field Operations

External Stakeholders

- All fixed standpipe customers
- Local Government Authorities
- Development Commissions
- Customers of LGAs
- Government departments
- WALGA
- Department of Fire and Emergency Services
- Standpipe end-users
- People relying on standpipe services for drought relief (households not connected to scheme water, farmers etc.)



There is a general lack of publically available information about standpipes, how they work, where they are located, the permitted scope of use for a given standpipe, and what pricing applies. Customers seeking information are able to call the Water Corporation's Contact Centre to receive contact details for LGA's.

8. Conclusion

This paper has captured a multitude of issues associated with fixed standpipes and options to address the issues are identified. Feedback provided via consultation with affected stakeholders will enable Water Corporation to design changes to the policies, processes and management of fixed standpipes to deliver an improved customer experience and equitable product to the community.

Prior to any changes being made to the existing process, a business case will assess the impact of the changes utilising the information in this paper and contributions from affected customers and stakeholders. Depending on the nature and impact of the changes, approval may be required by the Minister for Water. Water Corporation will advise all standpipe customers in writing of the proposed changes.

9. How to provide Feedback

Water Corporation is inviting feedback from affected stakeholders on the issues identified, proposed solutions and alternative solutions by **20 October 2017**. Please make written submissions addressing the criteria below and email to tellus@watercorporation.com.au. Feedback should address the following criteria:

- Do the issues identified in this paper impact your business / organisation? If so, how and are you in favour of any of the options?
 - If possible provide specific examples referencing account number and location description of the standpipe and cite the section in which the option or issue/s is explored, (e.g. In reference to the issue discussed in in section 6.2, our standpipe located in X town is impacted because.....).
- What impact would the solutions identified in this paper have on your business / organisation?
- If possible, please describe the effort required to comply with the changes.
- Do you propose any alternative solutions?



10. Appendices



Figure 1: Eight lockable WC meters supplying two standpipes (see Figure 2) that customers access under a Special Agreement



Figure 2: Standpipes that the above meters are feed to



Figure 3: A bank of 6 meters, each with separate locks that can be access by customer under the terms of a Special Agreement.



Figure 4: A row of standpipes in the North West Region



Figure 5: Privately owned standpipe located on a street verge in Laverton WA with the Water Corporation's coin operated standpipe in the background.



Figure 6: A card operated standpipe that dispenses potable water, the 2nd standpipe supplies non-potable water, both standpipes belonging to Kojonup Shire



Figure 7: Instructions detailing how to operate a swipe card standpipe



Figure 8: WC coin operated standpipe located in Ora Banda



Figure 9: Inside a coin operated standpipe controller



Figure 10: Picking up coins that fell out of the control panel when the door was opened