



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

CUSTOMER PERCEPTION AND SATISFACTION SURVEY 2017/18

Results Report

Department of Water and Sanitation

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EXECUTIVE SUMMARY

The 2017/2018 Customer Perception and Satisfaction Survey (CPSS) undertaken by the City of Cape Town's (CCT) Water and Sanitation Department (WSD) sought to gain understanding on the lived reality of household consumers (in formal and informal settlements) and business consumers (operating formally and informally). This involved assessing the responses from a total of 4 040 personal interviews and online questionnaires (allowing results from the study to be statistically significant and representative at the city level) across various attributes. The purpose of this executive summary is to bring out the most significant results of the study.

In terms of **drinking water and water quality**, leaks, supply disruptions (availability), pressure management and water cleanliness were raised as existing issues in need of intervention. The key intervention recommended in the study was for the supply of standpipes in informal settlements to be increased, and the existing stock to be better maintained.

Overflowing manholes, blocked drains/ sewers and the state (cleanliness, maintenance, supply) of shared toilet facilities emerged as the most frequently cited issues with **sewage and wastewater** services provided by the City. In addition to infrastructure upgrade/ expansion/maintenance, the survey revealed that significant demand exists from businesses to make use of treated effluent if provided by the City at a lower cost than that of potable water.

With regards to **stormwater services**, flooding (of roads and properties) and blocked catch pits were commonly stated sources of dissatisfaction from residents and businesses. Respondents expressed a desire for the City to explore avenues through which more rainwater could be captured through the stormwater system.

As the first post-drought edition of the CPSS, new questions under the **water conservation** theme revealed how the majority of respondents considered the City's Day Zero messaging and drought campaign as having been successful. Continued public education was seen by survey respondents as a means by which water conservation efforts could be sustained.

Whilst the majority of respondents feel that the City's water-related **metering** and billing are accurate, input from residents and businesses indicated a desire for metering to be undertaken more frequently, and for **billing** to be made easier to understand.

Traditional **communication** channels (mass media, contact centre, visiting municipal offices) prevail in terms of current and preferred future use by survey respondents. The findings indicate that improved communication channels (e.g. ward councillors), content (regular progress/status updates), and capacity (responsiveness) may allow the City to foster more positive sentiment from its WSD customers.

Overall, the value of CPSS is in revealing how the attainment of technical standards of service delivery (as seen in measures such as the Blue Drop score) does not necessarily directly translate into customer satisfaction. In this regard, the CPSS allows the City to be more attuned to mediating gaps between what is feasible (from both engineering and economic perspectives), what customers expect, and what they value or consider to be important. Mediation of this gap may be aided by effective communication (two-sided), as well as promotion of interventions that nudge consumers' knowledge and behaviour towards attitudes and practices that emphasise greater civic-responsibility.

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ABBREVIATIONS

AADD	Average Annual Daily Demand
ABSD	Area based Service Delivery Area
CCT	City of Cape town
CID	City Improvement District
CNO	City News Online
CPF	Community Policing Forum
CPSS	Consumer Perception and Satisfaction Survey
DWAF	Department of Water and Forestry
DWAS	Department of Water and Sanitation
IAIAsa	International Association for Impact Assessment South Africa
N	Number
NHW	Neighbourhood Watch
NPO	Non-Profit Organisation
PI	Personal Interview
Q	Question
SAQ	Self-administered Questionnaire
SIC	Standardised Industrial Classification
SMS	Short Message Service
SRA	Special Rates Area
WMD	Water Management Device
WSD	Water and Sanitation Department

1. BACKGROUND AND PURPOSE

This document presents highlights¹ of the results of the 2017/2018 Customer Perception and Satisfaction Survey (CPSS) undertaken by the City of Cape Town's (CCT) Water and Sanitation Department (WSD). This section serves as an introduction to the report by first outlining the objectives of the 2017/2018 Customer Perception and Satisfaction Survey and then indicating how the report ambit achieves these objectives.

1.1. Intent

The CPSS seeks to measure current satisfaction levels, identify areas for improvement, and investigate forces shaping consumption.

Objectives

The main objective of the CPSS is to understand customer perceptions relating to the quality of the water and sanitation services provided by the City of Cape Town, to enable the City to be more responsive and provide better services to all of its customers. In addition, it is envisaged that this will allow the WSD to:

- Gain insights about customer requirements, and their water- and sanitation-related knowledge, attitudes, and practices.
- Generate feedback about its products and services in comparison to the CCT WSD customer service charter standard².
- Attune towards more focused customer service.
- Guide service delivery improvements.
- Develop cooperation on consumer roles required, e.g. high payment levels and positive behaviour changes (like water saving when required in serious droughts).
- Assist with the identification of quick measures to bring about the desired improvements or address complaints and provide corrective actions for respective branches in the Department.
- Drive innovative efforts and initiatives of Water and Sanitation branches.
- Consistently and better address customer needs and expectations, maintain brand reputation and facilitate long-term relationships with Water and Sanitation Customers.
- Meet legal compliance as prescribed by the National Department of Water and Sanitation.
- Understand the impact of the recent drought crisis.

¹ This report discusses the most relevant and actionable results from the survey raw data. This report is based on a complete dataset of raw and analysed data availed to CCT and from which further analysis (e.g. per ABSD/ district/ suburb) may be undertaken

² CCT, 2014. Online. Available:

http://resource.capetown.gov.za/documentcentre/Documents/Agreements%20and%20contracts/Consumer%20Service%20Charter%202014-15_a.pdf

Rationale

“If every month, you as the surveyors can come and check our concerns and take action quickly!”

Philippi resident in response to the question *‘Do you have any suggestions on how to improve the City’s municipal water service we provide you?’*

“Is there any point to me making a suggestion?”

De Bron resident in response to the question, *“Do you have any suggestions on how to improve the stormwater services we provide you?”*

Outcomes of the CPSS are relevant on legislative, regulatory, strategic and operational levels. From a **legislative** background, the CPSS allows compliance with Section 23 of the Water Services Act³ which discusses the provision of information to consumers. Taking a **regulatory** perspective, the National Norms and Standards for Domestic Water and Sanitation Services⁴ provides cross-cutting principles for monitoring and reporting on aspects including water quality and wastewater. On a **strategic** level, customer satisfaction is identified as a focus area for the CCT Water Services Development Plan⁵. At an operational level, undertaking the CPSS allows the CCT WSD to gauge the extent to which it aligns with its Consumer Charter. Performance measurement through the CPSS thus allows the CCT WSD to work through the customer satisfaction cycle in line with government policy⁶.

The CPSS is thus undertaken annually and helps the WSD ensure consistency of quality and quantity of its services and products, allowing branches within the Department to better-understand if set-processes are followed, documented and maintained.

1.2. Ambit

In order to measure the level of satisfaction with services provided by CCT WSD, a statistically significant and representative sample of customers was surveyed.

³ Republic of South Africa, 1997. Online. Available: <http://www.dwaf.gov.za/Documents/Legislature/a108-97.pdf>

⁴ DWAS, 2017a. Online. Available: <https://www.gov.za/documents/national-water-act-national-norms-and-standards-domestic-water-and-satination-services-8>

⁵ CCT, 2017. Online. Available: <http://resource.capetown.gov.za/documentcentre/Documents/City%20strategies,%20plans%20and%20frameworks/Water%20Services%20Development%20Plan.pdf>

⁶ DWAS, 2017b. Online. Available: <http://www.dwa.gov.za/Projects/PERR/documents/2018/Revised%20Edition%20-%20RPMS.pdf>

The report outlines highlights from the survey results. This section discusses how this sample was surveyed, and what its key socio-demographic characteristics were.

Channels

- CCT website
- CCT social media accounts
- CCT media office
- CCT Women for Change Network
- Designated CCT CPSS e-mail account
- Mass media including community newspapers and radio
- Community Policing Fora (CPFs), City Improvement Districts (CIDs), Special Rates Areas (SRAs) and Neighbourhood Watches (NHWs) registered with the City
- Leaflet drop-offs at formal⁷ and informal⁸ households and businesses⁹
- CCT newsletters
 - CNO
 - E-nform
 - Water-comms
 - Energy, water and waste commercial businesses database
- Newsletters of third parties
 - IAIAsa
 - GreenCape
- Phone calls targeted at the top 1% AADD business customers

⁷ Refers to residential consumers in formal settlements

⁸ Refers to residential consumers in formal settlements

⁹ Refers for formally registered businesses as well as informal business using the City of Cape Town definition as per

<http://resource.capetown.gov.za/documentcentre/Documents/Bylaws%20and%20policies/Informal%20Trading%2c%202013%20-%20%28Policy%20number%2012664%29%20approved%20on%2026%20September%202013.pdf>



Figure 1 CPSS Fieldwork - Business respondents¹⁰

The survey was administered from March to April 2019 through Personal Interviews (PIs) [paper-, telephone-, and computer-based] as well as Self-Administered Questionnaire (SAQ) [web- and paper-based]. Electronic tablet devices were the primary means by which the survey was administered. Paper-based questionnaires were administered in areas with high safety risks, and as a back-up measure for post-load shedding cellular data network issues associated with Tablets. Personal interviews were undertaken on-site at households and businesses by fieldworkers proficient in local languages and residing in local communities.

Thirteen fieldworkers were chosen through the City's database of unemployed graduates and registered on the City's Job-seeker Database through their respective sub-councils. PIs were based on a random selection of respondents (every fourth unit within a ward) as well as respondents' availability, consent and qualification to take part. The wards in which PIs were undertaken were based on a randomised list.

The administration of the survey coincided with the run-up to the 2019 General Election. This negatively influenced the survey as respondents complained of **survey fatigue** due to election polling undertaken around the same time. The run-up to the elections also resulted in an increased incidence of community protest activity, particularly in informal settlements. The negative impact of these issues on data collection was mitigated by informing councillors, NHWs and CPFs as well as community organisations

¹⁰ Source: CCT Communication. Credit: Bruce Sutherland. Edited by Urban-Econ to anonymise respondents' identity

about the survey. SAQs were accessed through a link on the City website and open to all qualifying and consenting respondents. It is worth noting that **2017/2018 represents the first edition of the CPSS accessible online through the City's website.**

The PIs and SAQs were both based on questionnaires that contained both closed- and open-ended questions. **The questions are an iteration of previous editions of the CPSS** and reflect the results of a pilot of the survey. The questions also reflect the fact that the 2017/18 CPSS is the first edition undertaken since the zenith of the 2015-2018 Cape Town water crisis¹¹.

Information in this **report** is primarily based on public perception and may differ from actual service delivery output from the City. Where applicable, these public perceptions are **triangulated** with secondary data provided by the City and comparison to previous editions of the CPSS. The chapter headings of this report reflect the main sections of the questionnaire, these being Drinking Water and Water Quality; Sewage and Wastewater; Stormwater; Water Conservation; and Metering, Billing and Communication. Information provided in this report is aggregated for all respondent groups (formal/informal residential households and businesses) at the broader City level unless otherwise stated. Information is presented for these sub groups where there are notable differences in results or where the level or nature of service provided is different for the sub groups.

Photographs and direct quotations¹² are incorporated in the report for **illustrative purposes**. Whilst some content in this report is paraphrased, all quotations are presented verbatim and original questions from the questionnaires are all presented below the applicable report text. In instances where a question was modified for different respondent groups (i.e. tailored towards an audience of formal/informal residents or businesses, but still capturing the same response), all variations of such questions are displayed. Unless otherwise stated, all tables list items in descending order of frequency.

The **sample** consisted of formal residential, informal residential and business respondents. **Formal residential** respondents were stratified by income¹³ and dwelling unit type (stand-alone or shared unit

¹¹ CCT, 2019. Online. Available:

<http://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/damlevels.pdf>

¹² Quotations included reflect the perception of Cape Town Residents and have been provided to give the reader rational and context. They thus do not represent the entire City voice. Similarly, the sentiments or opinions presented in these quotations may not necessarily be factual, true or evidence based. Their value is however in their ability to reveal an additional layer of 'lived experience' that may not be revealed through aggregated tables and graphs.

¹³ Data sourced from <https://youthexplorer.org.za/profiles/municipality-CPT-city-of-cape-town/>

such as flats, apartments, estates¹⁴ and complexes¹⁵). **Informal residential** respondents accounted for backyarders as a distinct sub-group. Formal and informal **businesses** were stratified by size, SIC sector and formality. Small businesses were classified as those with less than 50 employees¹⁶. Water-dependent NPOs including churches, shelters and sports clubs were also surveyed using the business questionnaire. All the above were then targeted based on ABSD¹⁷, administrative district¹⁸ and ward¹⁹, with suburb²⁰ and street data also captured. Maps were generated in order to capture locations of informal settlement respondents.

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- ¹⁴ CCT, 2019. Online. Available: https://odp-cctegis.opendata.arcgis.com/datasets/a4f9114d5c274b4385a68373beb3cb49_105?geometry=16.545%2C-34.332%2C21.277%2C-33.534
- ¹⁵ CCT, 2019. Online. Available: <https://odp-cctegis.opendata.arcgis.com/datasets/complexes?geometry=18.117%2C-34.072%2C19.301%2C-33.873>
- ¹⁶ CCT, 2019. Online. Available: <http://resource.capetown.gov.za/documentcentre/Documents/Bylaws%20and%20policies/Business%20Support%20-%20Policy%20number%2046489%20approved%20on%2031%20May%202018.pdf>
- ¹⁷ CCT, 2019. Online. Available: <https://odp-cctegis.opendata.arcgis.com/datasets/area-based-service-delivery-areas>
- ¹⁸ CCT, 2019. Online. Available: <https://odp-cctegis.opendata.arcgis.com/datasets/city-admin-district>
- ¹⁹ CCT, 2019. Online. Available: <https://odp-cctegis.opendata.arcgis.com/datasets/wards>
- ²⁰ CCT, 2019. Online. Available: <https://odp-cctegis.opendata.arcgis.com/datasets/official-suburbs?geometry=18.137%2C-34.016%2C19.321%2C-33.817>



Figure 2 CPSS Fieldwork - Approaching household respondents²¹

Respondent profile

7 666 households were approached for participation in the questionnaire. 52% (4 040) of these completed the questionnaire, with the rest either not present, willing, consenting, qualifying or completing the questionnaire. The achieved sample size allowed a **95% confidence interval with a 5% margin of error in deductions made from the response data**. Data cleaning and quality management activities included 1 824 respondent telephone calls to verify their captured survey responses and evaluate the survey experience. As not all questions were compulsory (given the questionnaire's length of 106 questions), the questionnaire was considered complete if a minimum of 60% of the core questions were answered, in line with better-practice literature²². Throughout this report, reference is made to the number of respondents per question referred to. Participation in PIs was based on the following qualification criteria:




- Present
- Age 18 or older

²¹ Source: CCT Communication. Credit: Bruce Sutherland

²² De Leeuw, E. D., Hox, J. J., and Huisman, M. (2003). Prevention and treatment of item nonresponse. *Journal of Official Statistics*, 19, 153-176.; The American Association for Public Opinion Research. 2016. Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 9th edition. AAPOR.; Sivo, S. A., Saunders, C., Chang, Q., and Jiang, J. J. (2006). How low should you go? Low response rates and the validity of inference in IS questionnaire research. *Journal of the Association for Information Systems*, 7(1), 17

- Willingly and voluntarily consent to participate
- Capable of providing informed responses regarding household municipal water and sanitation service
- Has resided/worked in Cape Town for the past year.

Table 1: Total respondents per survey-type and survey-medium

Medium	Type: Informal	Type: Formal	Type: Business
Tablet 	709	1 439	227
Hard Copy 	1 056	51	204
City Website 	8	320	26
Sub-total²³	1 773	1 810	457²⁴
Total	4040		

From the map²⁵ presented overleaf, it is evident that most areas of Cape Town are represented in the dataset generated from the CPSS. Availability of the questionnaire on the City website allowed a broader spectrum of respondents than would have been the case with only door-to-door interviews.

²³ When considering these values, it must be noted that the distribution of the sample was based on the CPSS Specification document published by CCT, and does not necessarily reflect the broader City-level split between informal households, formal households and businesses

²⁴ 44% of these are informal businesses

²⁵ Source: Urban-Econ GIS data

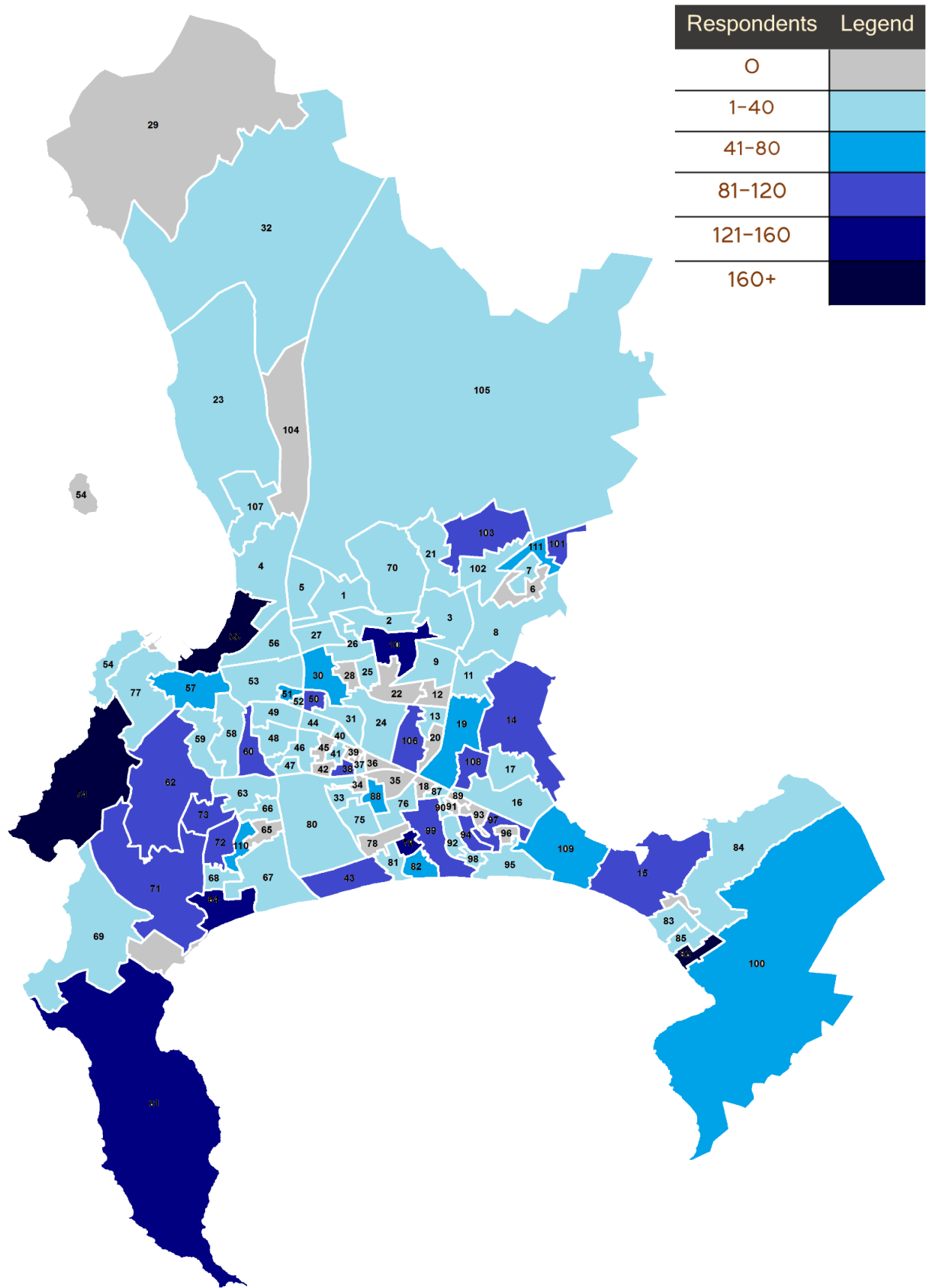




Figure 3 Spatial extent of respondents per ward

Table 2: Various attributes pertaining to the profile of CPSS respondents are presented below:

Truncated socio-demographic profile	
	Typology 40% of informal survey respondents are backyarders 17% of survey respondents reside in flats/estates/apartments ²⁶ while 83% reside in stand-alone units 49% of formal business respondents share a building/complex/centre with other tenants
	Size Informal respondents had a mean household size of 3.2 individuals, which is similar to that of formal households (3.4) 15% of formal respondents have more than 5 household members 39% of business surveyed are micro in size (employing 2-5 persons)
	Primary activity 36% of informal respondents employed 51% of formal respondents employed 20% of business respondents in water-intensive sectors (construction, hospitality, manufacturing, etc.)
	Income 29% of informal respondents had Pay-TV and 20% had washing machine access 45% of formal respondents were from low-income wards ²⁷ , whilst 30% were from high-income ²⁸ wards 87% of business respondents declined to disclose turnover

N = 3 988; Q: What type of house do you live in? Which of the following best describes the type of property your business works out of in Cape Town?

N = 3 976; Q: How many people live in your home? How many people (including yourself) does your business employ in Cape Town?

N = 3 943; Q: How would you describe your employment situation? Which category best describes your business sector?

N = 4 040; Q: Which of the following do you have in your household? (select all that apply)

²⁶ This corresponds to Stats SA Census 2011 data which indicates 16% of the Cape Town population resides in such grouped units

²⁷ Defined in the CCT CPSS Specification Document as those with a monthly income of less than R7 000

²⁸ Defined in the CCT CPSS Specification Document as those with a monthly income greater than R15 000

Backyarders represent an important subset of informal households as they typically have relatively low income levels, but their location within planned settlements allows them greater access to services such as tapped water and amenities such as washing machines. This suggests the need for more targeted initiatives directed at formal properties with informal backyarders. Such units would typically have higher-than-mean water consumption.

One in seven formal households surveyed has more than five members. This has implications on metering and billing with those large households having an average of seven members.

Given that most businesses are small, businesses from the top 1% of water users were contacted directly in order to ensure the survey sample reflected the entire gamut of demand.

Median income levels per ward²⁹ and access to household assets may be utilised as a proxy for formal household income as the majority of formal respondents declined to share their household income level. As a result, a wide spectrum of user income bands was reflected in the survey results.

N = 3 676; Q: If you are prepared to disclose, what is the estimated monthly household income? If you are prepared to disclose, what is your estimated monthly turnover?

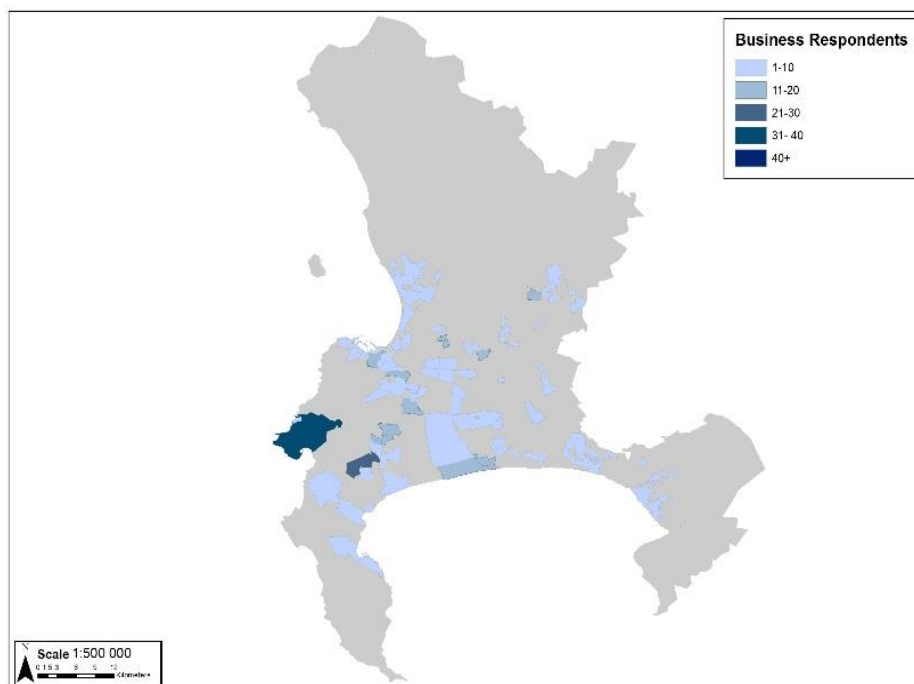


Figure 4 Location of business respondents

²⁹ <https://wazimap.co.za/profiles/municipality-CPT-city-of-cape-town/>

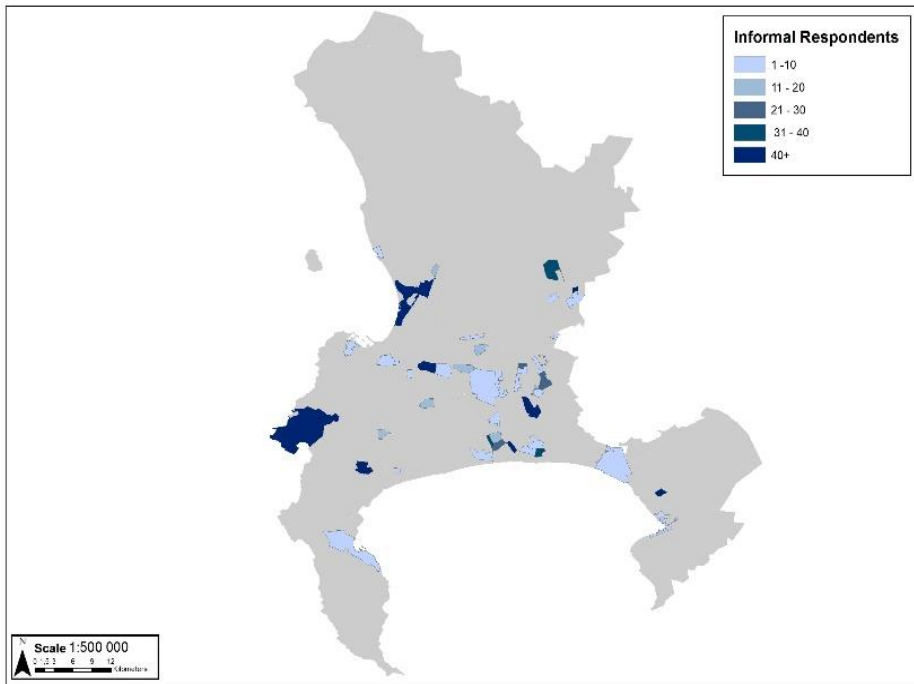


Figure 5 Location of informal respondents

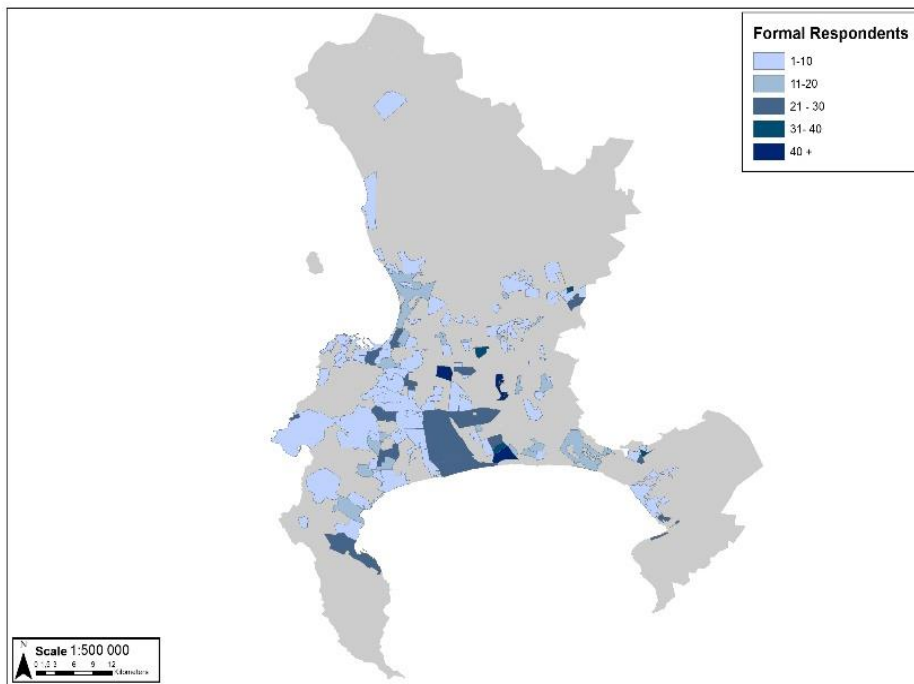


Figure 6 Location of formal respondents

2. DRINKING WATER AND WATER QUALITY



Figure 7 Drinking water tap at an NPO³⁰

³⁰ Source: Urban-Econ. Credit: Nicole Crozier

2.1. Service received

In line with a priori expectation, most households receive potable water from the City and access this through a tap in the household. Designation of the most frequently utilised alternative water sources is summarised below:

Table 3: Use and source of alternative water

Top Alternative water use	#1 source	#2 source	#3 source
Washing outdoors	Rainwater	Greywater	Borehole/ well point
Watering outdoors	Rainwater	Greywater	Borehole/ well point
Watering indoors	Rainwater	Spring water	Greywater
Human drinking/ cooking/ food preparation	Spring water	Bottled water/ rainwater	Borehole/ well point
Washing indoors	Rainwater	Spring water	Greywater
Toilets/ ablution	Greywater	Rainwater	Borehole/ well point
As an ingredient of a product/ preparing food/ industrial process ³¹	Spring water	Rainwater	Bottled water

N = 4040; Q: If your household uses water from an alternative water source, what is this used for (select all that apply)? What does your business use drinking water for? (select all that apply)

Washing outdoors was defined in this survey as including vehicles, paved surfaces and equipment. Washing indoors included the washing of clothes, dishes, surfaces and floors. Industrial processes include water use during manufacturing activity, whilst examples of food preparation include washing or boiling of vegetables.

Rainwater is the most commonly utilised alternative water source for multiple uses, in line with City guidance³². Its relatively high use as an ingredient/input/for cooking indicates the importance of **safe and affordable rainwater storage availability** (ranging from buckets to tanks). This is particularly important for informal businesses that typically made use of rainwater as an input in their activities, and in the case of informal businesses who may not always be able to treat this water.

Spring water is assumed to be trusted by respondents; hence they use it for drinking and meal preparation purposes. This signals an area where public education is required as the City's guidelines

³¹ Only applicable for business respondents

³² CCT, n.d.. Online. Available:


http://resource.capetown.gov.za/documentcentre/Documents/Graphics%20and%20educational%20material/Alternative_Water_Resources_Rainwater_English.pdf

advise that residents only use it for flushing toilets³³. Similarly, in cases where residents prefer spring water over municipal water (citing its perceived superior quality), it is important that awareness be raised of the fact a significant amount of the municipal drinking water supply is already sourced from various springs. Bottled water is another important alternative source of water for formal households and businesses. Informal households, however, did not make much use of bottled water; this in line with **bottled water's affordability relative to the other top alternative sources which are all free**. Whilst not investigated in the CPSS, it is possible that the increase in use of bottled water by household may have been driven by stock-piling behaviour in the run-up to day-zero.

It may be inferred that the majority of respondents understand that rainwater and grey water may not be immediately suitable for drinking and cooking without treatment and thus respondents use it primarily for cleaning and watering. Informal households mainly treat their alternative water by boiling, whilst formal households mainly use chemical and filtration methods³⁴. The use of greywater in washing points to **the need for improved education of households on the difference between and safe applications of black and greywater** (its use in washing was relatively high for both formal and informal households, and across different respondent educational levels).

*N = 257; Q: If your household uses alternative water, what is this water used for? (Select all that apply)?
Based on the previous question, do you treat any of this water? If so, please explain.*

Table 4: Borehole and well points: formal residential households

	96% households with boreholes and well points claim to have appropriate signage
	82% of households with boreholes and well points observed by Interviewer as having non-compliant or no signage

*N = 1 608; Q: Do you have a well point/borehole?
N = 185; Q: If yes, have you registered it with the City?
N = 185; Q: If you use borehole/well point or alternative water have you put up appropriate signage to inform people that the water is not fit for consumption?
N = 1 632; Q: Does the property have a non-drinking water sign near the entrance?*


³³ CCT, 2018. Online. Available: <http://resource.capetown.gov.za/documentcentre/Documents/Procedures,%20guidelines%20and%20regulations/Disaster%20and%20demand%20FAQ.pdf>

³⁴ This includes vinegar, bleach, chlorine, tablets iron-removal filters

Boreholes and well points feature prominently as the third most commonly used alternative source of water for washing, drinking/cooking and toilet use. This must be contextualised that the CPSS surveyed a range of households and businesses across the spectrum of affordability. This means that a large percentage of respondents may be assumed to have had limited affordability to access borehole water. Of those that do have boreholes, it is also possible that some of these residents would have underreported their access to borehole services, particularly in cases where such boreholes are not fully registered.

A tenth of household respondents indicated that they have a borehole/well point with the majority of these respondents stating that their borehole/well point was registered with the city (83%). Despite this, **the majority of households claiming to have appropriate signage were found by CPSS interviewers to not have compliant borehole signage.**

Table 5: standpipes: informal households

	95% users do not know how much water they are allowed to collect daily³⁵
	99% of standpipes are within 200m of informal residence
	40% standpipes were indicated as having issues

46% of informal respondents (excluding backyarders) receive water from a shared standpipe or shared tagged standpipe. Almost all respondents' nearest standpipe distance is in line with national government standards³⁶. Almost three quarters of users reliant on standpipes, spend less than 15 minutes a day collecting water, this includes time walking to and from the standpipe, waiting in line and filling containers. Trips to collect water typically involve two buckets, each with a 20-litre capacity. One in seven respondents collect water for more than five persons on a daily basis. The majority of those using **tagged standpipes** indicated that their tag had been issued to them by the City of Cape Town. The most commonly cited issues with standpipes were:

1. Leaks
2. Broken tap or handle
3. Poor drainage around standpipe

N = 1 773; Q: From where do you get your household drinking water? (select all that apply)

N = 845; Q: Do you know how much water per day you are allowed to collect from a tagged standpipe?

³⁵ In the previous version of the CPSS this was 94%

³⁶ DWAF, 2003. Online. Available:

<http://www.dwaf.gov.za/Documents/Policies/Strategic%20Framework%20approved.pdf>

N = 846; Q: For how many people do you collect water per day?

N = 1 017; Q: What is the approximate amount of time your household spends collecting water a day? (the total time includes the time to walk to the water source, wait in line, fill the container and return home)

N = 705; Q: Please specify how many containers are filled for one trip?

N = 1 046; Q: How many litres of water does the container hold? Please note that the average bucket capacity is 20l.

N = 569; Q: What is the approximate distance from your house to the nearest standpipe that you use?

N = 363; Q: If you get your water from a tagged standpipe, how did you get the tag?

N = 1 093; Q: What do you use to collect water from the water source or standpipe?

2.2. Satisfaction with service received

“Supply us with standpipes as we use water from illegal sources”

Old Strandfontein resident in response to the question ‘Do you have any suggestions on how to improve the municipal (drinking) water service we provide you?’

Table 6: Satisfaction: Drinking water and water quality

Attribute	% satisfied: INFORMAL ³⁷	% satisfied: FORMAL	% satisfied: BUSINESS ³⁸
Taste	68%	70%	72%
Smell	70%	73%	73%
Appearance	67%	74%	74%
Pressure	62%	70%	70%
Availability	49%	60%	60%
Overall service	57%	69%	69%

Informal respondents have a significantly lower level of satisfaction than the other groups across all the water quality attributes considered. Notably, less than half of informal respondents are satisfied with the availability of water, this encompassing the quantity and duration of supply interruptions. As indicated in the footnotes, the figures presented in the table signify **an overall reduction in satisfaction compared to the previous year in which the CPSS was undertaken.**

N = 4 029; Q: How satisfied are you with the taste of the water? How satisfied are you with the odour or smell of the water? How satisfied are you with the appearance or colour of the water? How satisfied are

³⁷ Comparable figures for the previous CPSS were 82% for taste, 87% for smell, 80% for colour and 80% for pressure

³⁸ Comparable figures for the previous CPSS were 83% for taste, 92% for smell, 92% for colour, 95% for pressure and 91% for overall service

you with the water pressure? How satisfied are you with the number of interruptions to the supply/availability of water as well as the duration of these interruptions? Overall, in your opinion how satisfied are you now with the drinking water services provided by the City?

Complaints

The percentage of formal households that logged complaints in the past year regarding the municipal drinking water service (17%) was higher than that of businesses (11%³⁹) and informal households (10%), with all three groups primarily making these complaints through walk-in centres and the contact centres. Reference numbers were provided for 64% of the complaints made, which may be explained by the fact that not all complaints were made through official channels (e.g. social media and ward councillors).

N = 3 942; Q: Have you logged a complaint with the municipality in the past year regarding the municipal drinking water service?

N = 511; Q: Did you receive a reference number?

N = 688; Q: If yes, how did you complain? Select applicable.

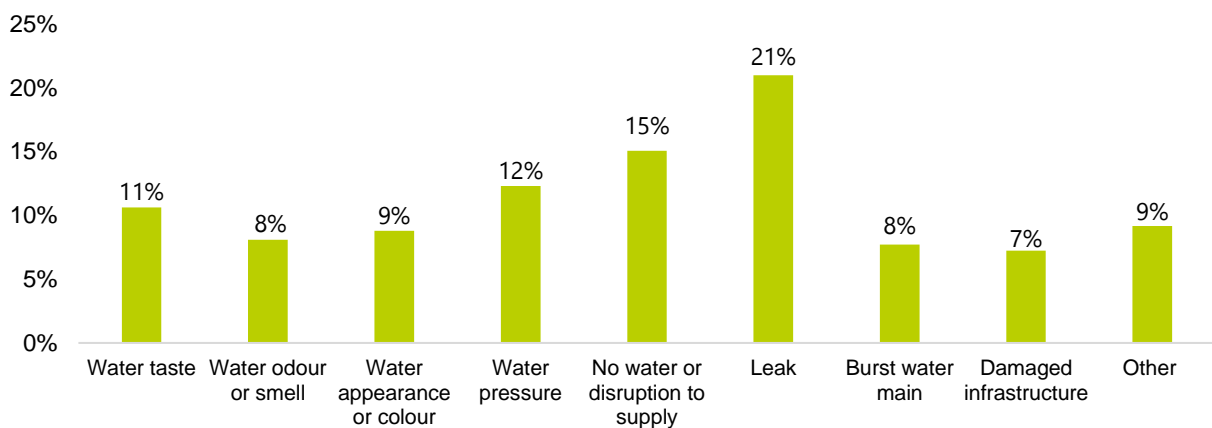


Figure 8 Nature of complaint: Drinking water and water quality

³⁹ It must be noted that since many businesses operate from shared premises such as office parks and shopping centres, their complaints would typically be handled through a centralised third-party such

³⁹ In future editions of the CPSS it is suggested that the distinction be made on whether such leaks were on the respondents' property (and thus the respondents' responsibility) or outside their property (and thus the City's responsibility) as a managing agent

The majority of complaints were made about leaks⁴⁰ (49% of these made by informal residents, and 44% made by formal residents). Whilst indicative of a need for improved infrastructure maintenance, the prominence of complaints regarding leaks may also be emblematic of increased awareness about the importance of conserving water. The bulk of complaints about water availability were made by informal residents.

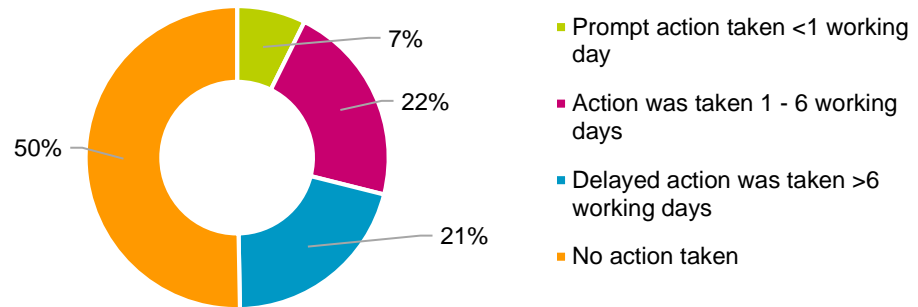


Figure 9 Result of complaint: Drinking water and water quality

According to respondents, no action was taken to remediate the complaint logged in approximately half of the most recent cases reported. The survey identified that Informal residents had the highest number of unresolved complaints

N = 511; Q: What was the result of your most recent complaint?

N = 511; Q: What was the nature of your complaint?

“The fault report mechanism is dreadful. Having texted a detailed report of where there was (precious) water coming out of a point in the pavement I was sent a stock response asking for exactly the info I had given. Also, when I phoned on another occasion, I was asked for my account number, etc. - when I was reporting water flowing in a public place... It hurts to see the waste when we are trying to be so careful.”

observatory resident in response to the question ‘Do you have any suggestions on how to improve the municipal (drinking) water service we provide you.’

⁴⁰ In future editions of the CPSS it is suggested that the distinction be made on whether such leaks were on the respondents’ property (and thus the respondents’ responsibility) or outside their property (and thus the City’s responsibility)

2.3. Perception of service received

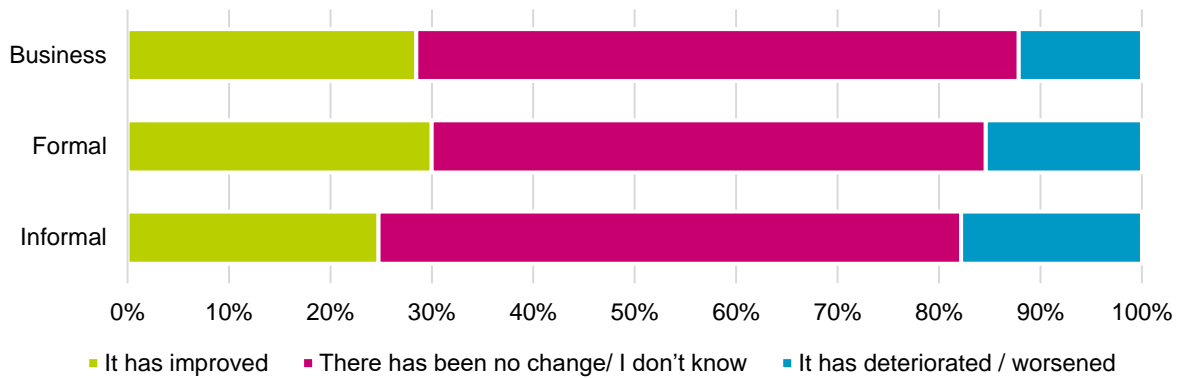


Figure 10 Suggestions to improve service: Drinking water service

N = 4001; Q: How has the City's municipal drinking water service changed over the past year?

More respondents feel that the drinking water service has improved than those that feel it has deteriorated. A wide range of suggestions was provided by respondents on how to improve services rendered to them as presented below.

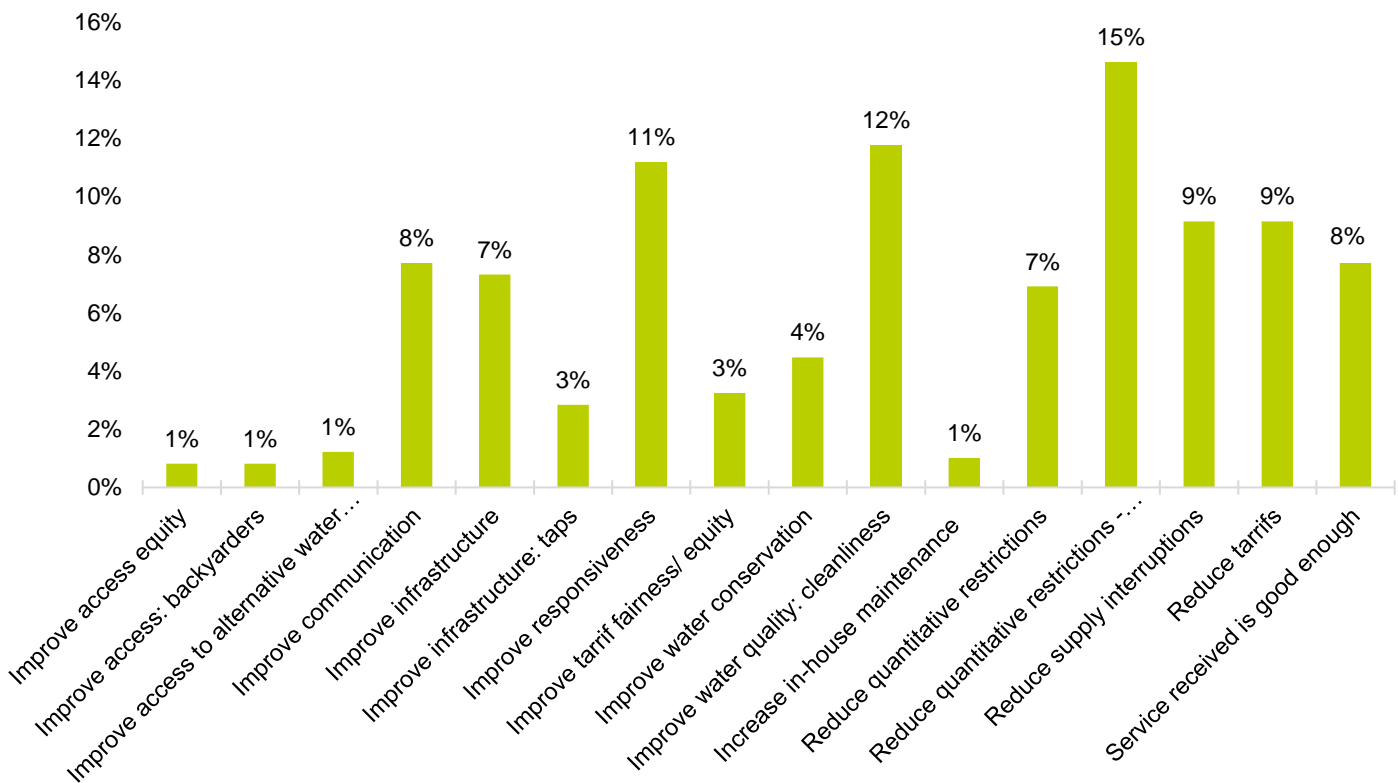


Figure 11 Perceived change over the past year: Drinking water service

“If we call for your help, please do a follow-up to check if we have been assisted”

Macassar resident

A large percentage of formal respondents feel that the **water pressure** reductions made in recent history detract significantly from the quality of the service provided.

A large percentage of informal respondents voiced displeasure with the **cleanliness** of water provided (notably this group has limited means to afford bottled water, unlike formal and business respondents).

Respondents across the board all expressed displeasure with the **responsiveness** of the City to their issues and complaints. Comments received in this regard related to **follow-ups** from the City to assess if appropriate action has been taken to address issues raised.

3. SEWAGE AND WASTEWATER




Figure 10 Overflowing manhole cover in Wallacedene⁴¹

⁴¹ Source: Urban-Econ. Credit: Khanya Maliwa

3.1. Service received

An overwhelming majority of formal and business respondents receive sanitation and/or sewage services from the City. Formal households thus typically make use of flush toilets within the house. Informal households, however, typically have limited access to flush toilets. As a result, many (12%) informal households make use of buckets for their sanitation needs, as well as latrines and chemical toilets. It is important to note that the City does not deploy buckets as an official means of accessing sanitation services. Use of buckets by respondents may thus include instances where buckets are used overnight within households due to safety concerns or individual preference.

Table 7: Top issues identified with sewage service: informal households⁴²

	Too dirty to use
	Does not flush
	Causes infection/diarrhoea etc.

Over two thirds of backyarders (68%) have access to at least one flush toilet, while the comparable number for those in informal settlements is 34%. It is however noted that it is not always possible to place flush toilets in areas that are vulnerable to flooding, have unstable ground or have a very high population density, as is the case with many informal settlements⁴³. The issues identified with informal household sewage services mirrors those from the previous CPSS and are linked (i.e. dirty toilets are likely to cause the spread of disease).

It is important to consider how informal residents dispose of greywater as they may not have access to sewage and wastewater infrastructure and amenities that formal households typically have (e.g. indoor sinks and septic tanks) The most frequently indicated means of disposing of **greywater** for informal households are:

1. Pouring onto the ground next to their houses
2. Pouring greywater down the toilet
3. Pouring onto the road where it drains down into a catchpit or road gully

N = 1 728; Q Do you have access to a toilet facility every day? If yes, then what type of sewage service does your house have access to? (select all that apply)

N = 264; Q: Are there any issues with the shared latrine (longdrop) or shared chemical toilet? If yes, specify the problem (select all that apply)

⁴² In the previous version of the CPSS these were: too dirty to use; blocked; and cannot flush

⁴³ CCT, 2019. Online. Available: <http://www.capetown.gov.za/Family%20and%20home/residential-utility-services/residential-water-and-sanitation-services/water-and-sanitation-services-in-informal-settlements>

N = 1 773; Q: How do you dispose of your household's greywater (wastewater from washing, cooking and laundry)? (select all that apply)

3.2. Satisfaction with service received

Table 8: Satisfaction: sewage, wastewater and shared toilets

Informal	Formal	Business
39%	66%	59%

N = 3 846; Q: Overall, in your opinion how satisfied are you now with the sewage services provided by the City? Overall, in your opinion how satisfied are you now with the sewage and shared toilet services provided by the City?

Over half of formal and business respondents indicated they are satisfied with the sewage and wastewater service provided by the City. This may be contrasted against the majority of informal respondents who are dissatisfied with the sewage and shared toilet service they receive, with a fifth of their complaints being about their shared latrine not working.

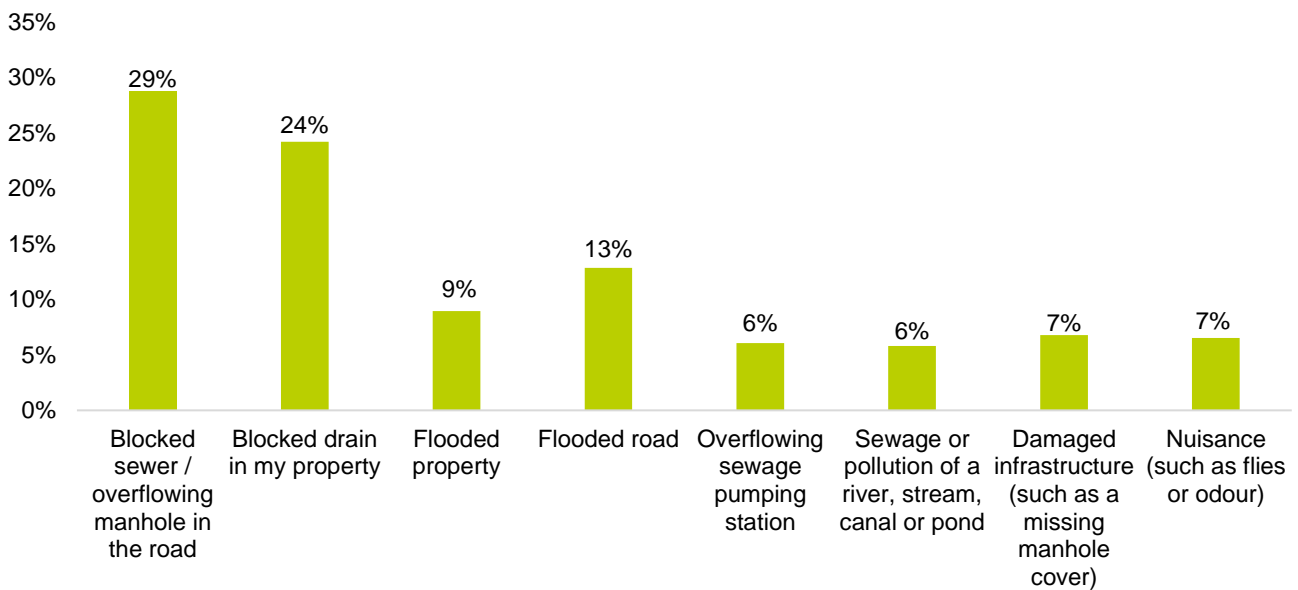


Figure 11 Nature of complaint: Sewage and Wastewater

The results presented above conform with blocked and overflowing sewers being the most common complaint type logged with the City⁴⁴.

N = 3 886; Q: Have you logged a complaint with the City in the past year regarding the sewage or shared latrine (longdrop)/shared chemical toilet service?

N = 488; Q: What was the nature of your complaint?

N = 355; Q: How satisfied were you with the response provided by the City?

N = 346; Q: What was the result of your most recent complaint?

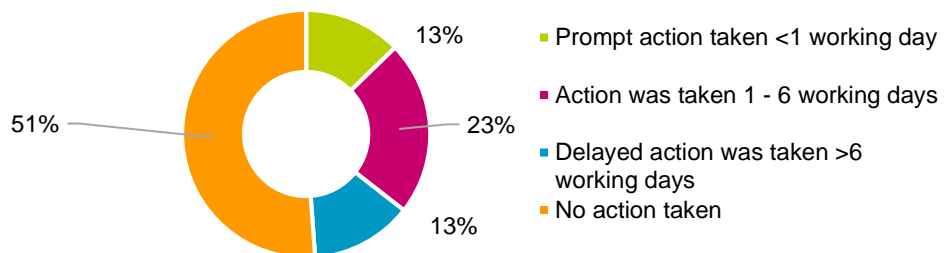


Figure 12 Result of complaint: sewage and wastewater

Over half of respondents indicated that no action was taken to address their complaints, with the majority of these complaints being about blocked sewer or overflowing manholes in roads and blocked drains in properties. Accordingly, only 35% of respondents stated that they were satisfied with the response provided by the City to their most recent complaint.

“When we have a blocked sewage drain, the council take their own sweet time to come. Treat all residential areas the same! Don't jump for the upper-class people and treat the lower class bad.”

Kuils River resident in response to the question ‘Do you have any suggestions on how to improve the sewage service we provide you?’

⁴⁴ CCT, 2019. Top 10 Water related Service requests: October 2017 to March 2019. Unpublished internal document.



Figure 13 Shared toilet facility in Khwezi Park⁴⁵

3.3. Perception of service received

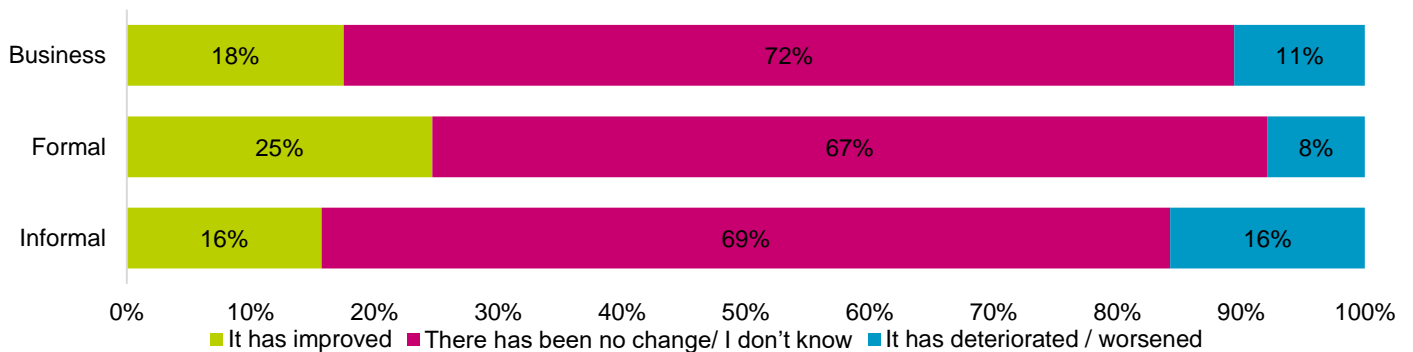


Figure 14 Perceived change over the past year: Sewage and Wastewater

N = 3 876; Q: How has the sewage service changed over the past year?

Whilst the general valence of responses indicated an improved service, informal residents held a more pessimistic view of the service provided than their formal and business counterparts. When asked how to improve the wastewater and sewerage service provided, informal respondents largely indicated that an **increase in the supply of toilets, and an improvement in their on-going maintenance** was the most important change they desired to see implemented. Business respondents expressed a need for the City improve its upkeep of drains.

⁴⁵ Source: Urban-Econ. Credit: Khanya Maliwa

Formal respondents implied that the bulk of sewage and wastewater complaints could be avoided if **significant infrastructural upgrades** were made to drains and pipes. It was felt that such upgrades would reduce the frequency of sewage leaks and blocked drains. Greater sensitivity to the environmental impact of sewage and wastewater was raised as something to be considered by a sizeable population of formal respondents. Formal respondents also indicated a desire for what they deem to be more fair or equitable pricing for sewage services. This refers to the relationship between the sewage service charge levied and one's water bill.

“The City of Cape Town should connect flow meters to the property sewage outlet. This way the billing is more accurate. At the moment we get billed according to water usage. Very inaccurate. Especially if residence start using rainwater to flush. This will result in undercharging for the service.”

Glencairn Heights resident in response to the question ‘Do you have any suggestions on how to improve the sewage service we provide you?’

“The cost of this needs to be looked at. Its calculated at a rate per KL water consumption. This factor should be lower as many people recycle water and thus less water goes down as sewerage.”

Kensington resident in response to the question ‘Do you have any suggestions on how to improve the sewage service we provide you?’

4. STORMWATER

4.1. Service received

The majority of formal residents (85%) and businesses (87%) receive stormwater services. Based on analysis of responses, **two thirds of those that believe they do not receive stormwater services- actually do receive a stormwater service from the City⁴⁶.**

Approximately 48% of informal respondents do not have access to stormwater services, with the majority indicating that when it rains, water collects on the ground next to their house and then seeps away over time. Those who do receive a stormwater service with water draining to a nearby catchpit or road gully are mostly backyarders. This is in line with expectations as **post-hoc provision of stormwater infrastructure for informal settlements is a challenging endeavour.**

N = 3 937; Q: Does your property receive a stormwater service from the City? After it rains, where does the stormwater on your property drain to?

N = 494; Q: If no, then where does your stormwater drain to?

4.2. Satisfaction with service received

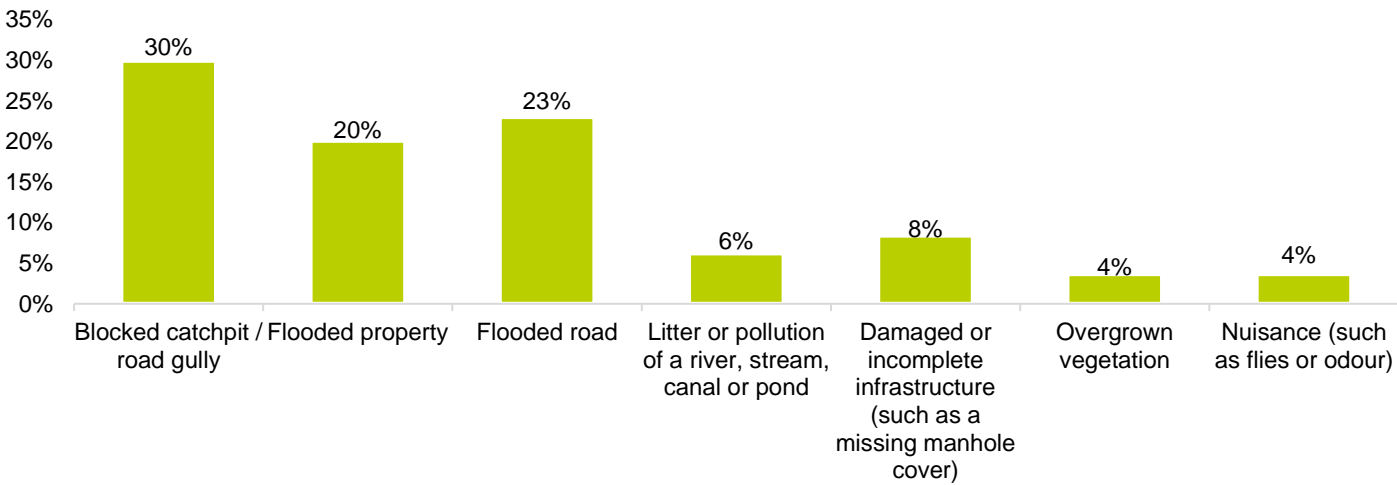


Figure 15 Nature of complaint: stormwater

N = 274; Q: What was the nature of your complaint?

N = 3 886; Q: Have you logged a complaint with the City in the past year regarding the stormwater service?

⁴⁶ In the next edition of the CPSS it is suggested that the question regarding awareness of stormwater service be refined

“Generally no issues apart from occasional gully grids and manhole covers missing, but that's no fault of the Department - social problem!”
 Monte Vista resident in response to the question *‘Do you have any suggestions on how to improve the stormwater services we provide you?’*

It is worth noting that stormwater had the lowest frequency of complaints in comparison to drinking water and sewage services. The majority of stormwater-related complaints were about blocked catchpits and/or road gullies. Floods (combination of road and property) also made up over two fifths of complaints mentioned in the survey. It may be possible that the high frequency of flooding complaints may in turn be linked to the blocked catchpits and road gullies. This points to the need for a holistic view towards maintenance of stormwater infrastructure.

Half of the respondents are of the belief that their most recent complaint did not result in any appropriate action being undertaken, with **only 24% of respondents stating they were satisfied with the response provided by the City.**

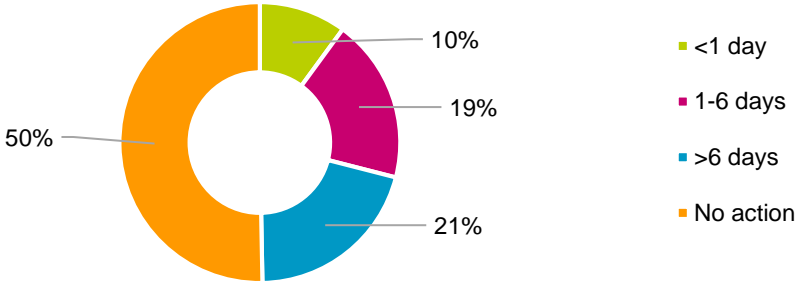


Figure 16 Result of complaint: stormwater

N = 169; Q: What was the result of your most recent complaint?

N = 191; Q: How satisfied were you with the response provided by the City?

4.3. Perception of service received

Compared to water quality and sewage and wastewater, stormwater had a relatively low percentage of respondents perceiving a deterioration of the service received over the past year. When asked how the stormwater service could be improved, key themes that emerged were:

- Prioritising leaks/flooding
- Prioritising flood-prevention
- Addressing cleanliness and odour
- Measures to conserve water through stormwater infrastructure (e.g. rainwater harvesting)

- Prioritising blockages
- Educating the public
- Greater regulation of users

“I really hope you guys are working on capturing the stormwater to re-use for non-potable uses. When it rains, so much can get lost and then we complain about dams emptying in drought!”

Rondebosch resident in response to the question ‘Do you have any suggestions on how to improve the stormwater services we provide you?’

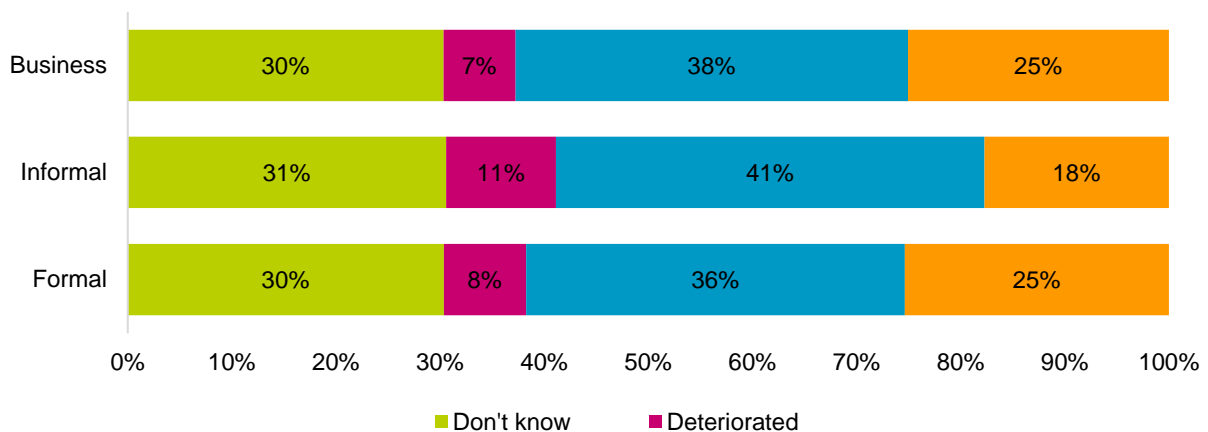



Figure 17 Perceived change over the past year: stormwater

N = 3 685; Q: How has the stormwater service changed over the past year?

4.4. Flooding

Table 9: Top issues

	Informal	Formal	Business
	16% experienced flooding	6% experienced flooding	8% experienced flooding
	67% resulted in water entering the house	29% resulted in water entering the house	67% resulted in disruption to operations or financial loss
	16% of those who experienced flooding subsequently received emergency relief	9% of those who experienced flooding subsequently received insurance assistance	19% of those who experienced flooding subsequently received insurance assistance

The high prevalence of flooding affecting informal residents is largely a function of informal settlements' intrinsic nature, as their location does not account for flood risk and their design does not always mitigate against such risk. Of the respondents that experienced stormwater or river flooding in the past year, the majority of these (81% of informal residents and 63% of formal residents) stated that the flooding resulted in damage to their property, the majority of this being minor. The primary forms of assistance provided to informal residents whose properties were affected by flooding were blankets and food.

N = 3 950; Q: Have you ever experienced river or stormwater flooding on your property?
N = 278; Q: Did the flood water enter your house? If yes, did the flooding cause a financial loss or disruption to your business operations?
N = 320; Q: Did you receive emergency relief? / Did your insurance cover the loss?
N = 63; Q: If yes, please select the relief you received.

4.5. Rivers, streams, canals, wetlands and ponds

Rivers streams, canals, wetlands and ponds are seen as important by most respondents, and they consider it important for the City to spend money managing these natural and man-made assets. Residents use these assets and the adjacent areas for recreational uses such as swimming, running and fishing. Satisfaction with the condition of these assets was low for both informal (36%) and formal (40%) respondents.

N = 3 491; Q: In your opinion, how important are rivers, streams, canals, wetlands and ponds to Cape Town?
N = 3 496; Q: In your opinion, how important is it that the City spends money to clean up the rivers, streams, canals, wetlands and ponds?
N = 2 856; Q: How satisfied are you with the condition/state or water quality of the closest river, stream, canal, wetland or pond?



Figure 18 Perceived change over the past year: rivers, streams, canals, wetlands and ponds

Indeterminate responses on the perceived change in the state of nearby aquatic resources may be in part due to limited use of these resources by respondents with only 8% of respondents having utilised them over the past year. This limited use of aquatic resources may in turn be due to limited awareness of their existence (68% of respondents stated they did not know how close their nearest aquatic resource was to the house) as well as the low levels of satisfaction that survey respondents indicated regarding their condition or water quality⁴⁷.

N = 3 475; Q: How close do you live to a river, stream, canal, wetland or pond?

N = 3 411; Q: How has the condition/state or water quality of the closest river, stream, canal, wetland or pond changed over the past year?

N = 338; Q: In the last year, have you used any river, stream, canal, wetland, pond or area next to (alongside) these for recreational or other use? If yes, specify what the activity was (select all that apply).

Only 9% of household formal respondents indicated awareness of active community actions groups and similar entities whose remit involves rivers, streams, canals, wetlands and ponds, with a minuscule proportion (3%) of residents indicating membership of these entities. The majority of businesses (54%) were of the opinion that the state of their nearest river, stream, canal, wetland or pond had no effect on their business operations.

N = 405. Q: Does the condition/state or water quality of the closest river, stream, canal, wetland or pond affect your business in any way?

N = 1619 Q: Are there any community action groups, friends of a river groups or catchment fora active in your area?

N = 179; Q: If yes, are you a member of any of these groups?

⁴⁷ It is proposed that future editions of the CPSS explore why use of the City's aquatic resources is low/ not higher

5. WATER CONSERVATION



Figure 19 Water storage tanks at business premises⁴⁸

“There is way too much focus on ‘punishment’ methods!”

Lansdowne resident in response to the question *‘Do you have any suggestions on how to improve water conservation?’*

“City must not create the impression that our water crises has gone away..... tell the public level 3 is now the new level 0”

Hout Bay resident in response to the question *‘Do you have any suggestions on how to improve water conservation?’*

⁴⁸ Source: Urban-Econ. Credit: Nwabisa Mali

5.1. Water restrictions

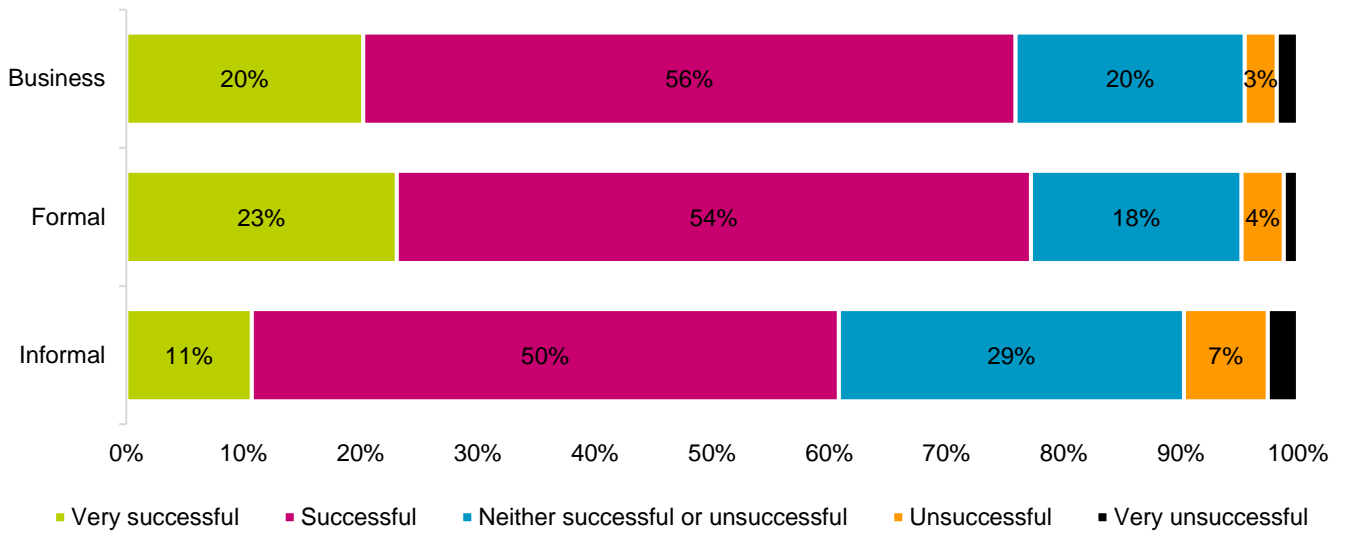


Figure 20 Perceived success of drought campaign

N = 3 839; Q: In your opinion, how successful were the drought campaigns/messages released over the past year?

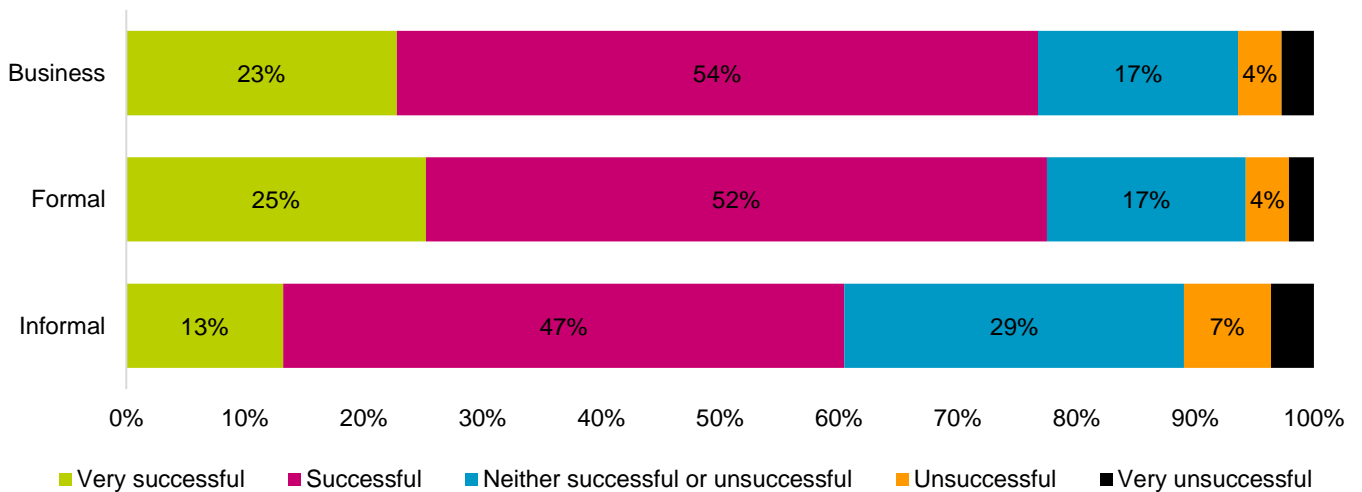


Figure 21 Perceived success of Day-Zero messaging

N = 3 905; Q: In your opinion, how successful was the Day Zero messaging released in the past year?

Over three quarters of formal and business respondents were of the opinion that the drought campaign messages released over the past year had been successful. **Radio and newspapers were the communication channels by which most respondents indicated they had been made aware of the recent drought, water restrictions and related information.**

N = 4 040; Q: How have you been made aware of the recent drought, water restrictions and related water information?

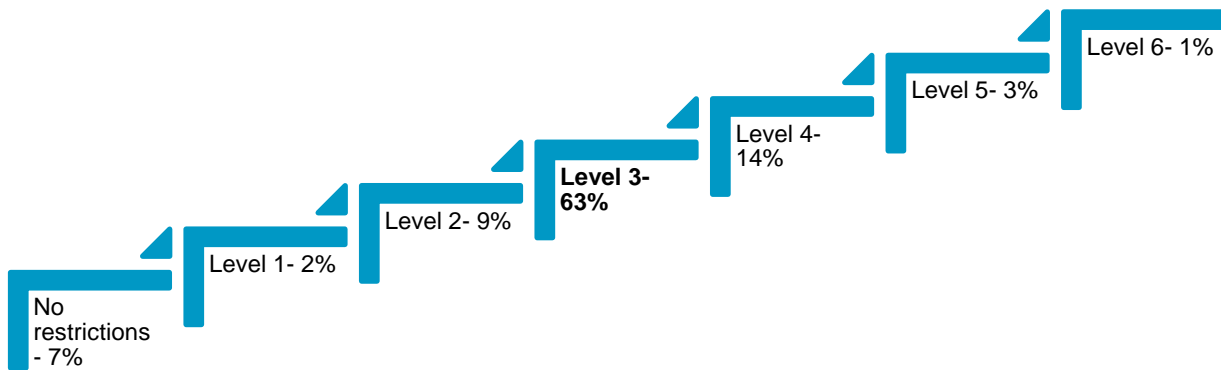


Figure 22 Respondent beliefs on current water restrictions (level 3)

Almost three quarters (72%) of respondents stated that they knew which level of water restrictions the City had imposed. When this was tested, it emerged that less than two-thirds of respondents knew what level of water restrictions the City had imposed at the time of the survey (level 3). The spread of incorrect answers across the various options was consistent across the three respondent groups, i.e. **levels of awareness/ignorance about what level of water restrictions apply were consistent for informal, formal and business respondents**. Despite this, the majority of respondents were able to correctly state what level of water restriction applied, which can be seen as a modicum of success for the City. The majority of those stating they did not know what level of restrictions applied were informal respondents (this is in line with expectations as section 2.1 of this document indicated how 95% of informal households do not know how much water they are allowed to collect daily).

N = 4 005; Q: Are you aware of the current water restrictions?

N = 2 859; Q: If yes, then what level of water restrictions are we currently at?

Table 10: Water management devices

Indicator	Formal	Business
Respondents with water management device	23%	14%
Satisfied with information provided about device	72%	70%
Received due to excessive water consumption	15%	60%
Received voluntarily	16%	30%
Received due to faulty meter	36%	10%
Received due to indigent households policy	33%	-

Whilst the majority of respondents stated they were satisfied with the information provided about their WMD, it is important to highlight the fact that no water at WMDs was the second most frequent WSD complaint logged with the City⁴⁹.

N; 416; Q: Do you have a water management device installed? If yes, how did you receive it?

N = 466; Q: How satisfied are you with the information you received about this meter device

⁴⁹ CCT, 2019. Top 10 Water related Service requests: October 2017 to March 2019. Unpublished internal document.

5.2. Changes made

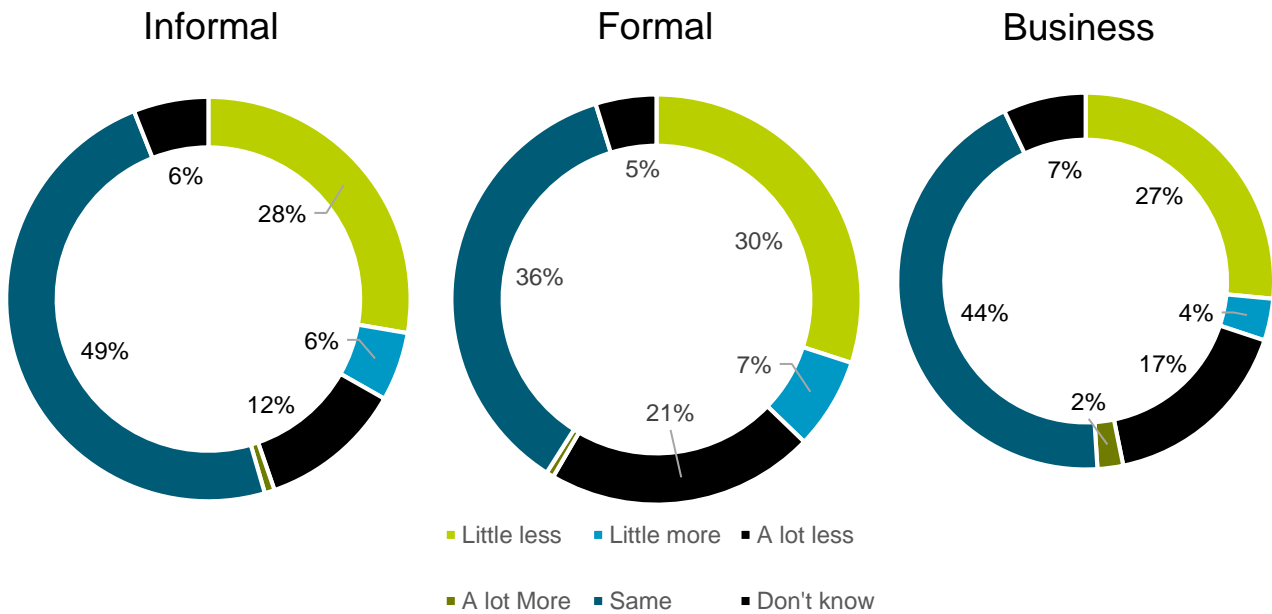


Figure 23 Water consumption compared to a year prior

= 4 015; Q: Compared to a year ago, how much drinking water do you think your household uses in a typical month?/ Compared to a year ago, how much potable / drinking water does your business consume in a typical month?

Only 8% of formal respondents indicated that they use more water now than they did a year prior.

Informal residents had the lowest percentage of respondents indicating a reduction in water use. Business had the highest percentage of respondents indicating they were using a lot more water than a year before.



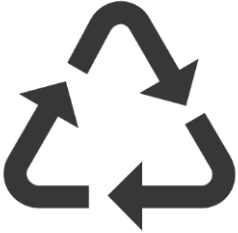
A fifth of businesses (21%) indicated that they had not made any changes over the past year to conserve water and reduce consumption, whilst less than 1% of formal households indicated they had not made any changes. Similarly, only 11% of businesses had undertaken water audits in the previous year. The main reasons cited by businesses for reducing consumption and saving water were:

1. To save money and reduce business costs (77%)
2. To comply with the water restrictions (75%)
3. It is morally the right thing to do (74%)

N = 456; Q: What is the main reason your business would choose to reduce consumption and save water? (select the top three reasons that apply)

N = 449; Q: Have you undertaken a water audit within the last year?

Table 11: Water conservation trends

	Most frequent changes made by households ⁵⁰	Most frequent changes made by business
	42% reduced laundry frequency	54% Actively encouraging staff to save water
	37% use bottled water	28% used alternative water sources
	34% Reduced car-wash frequency	24% changed the washing process
	31% Re-used bath-shower water to flush the toilet	22% monitor use by checking the water meter
	Households checking for leaks⁵¹	Business checking for leaks
	43% A few times	37% A few times
	21% Never	28% Never
	Re-use	
	23% of businesses recycle or re-use water ⁵²	54% of businesses likely to use treated effluent for non-drinking purposes if provided by the City at a lower cost compared to potable water ⁵³

Whilst a large percentage of households made various changes to reduce water consumption, uptake of devices such as flow-restrictor taps and dual-flush toilets was low. This may be a function of **households having already made these changes in previous years**, as well as the restrictive economic conditions prevailing over the past year. Over three quarters of respondents have checked their water meters for leaks in the past year. Based on the survey results, treated effluent may represent a means of reducing water use by businesses. The percentage of business indicating a willingness to consider use of treated effluent is however lower than when the previous CPSS was undertaken, as was the percentage of businesses recycling or reusing water.

⁵⁰ The most frequent changes made by households in the previous edition of the CPSS were frequency of watering lawn/garden, frequency of washing the car and collecting rainwater for outdoor use

⁵¹ In the previous CPSS, 34% of households indicated that they were checking for leaks monthly

⁵² In the 2016 CPSS this value was 43%

⁵³ In the 2016 CPSS this value was 70%

N = 249; Q: *What changes has your business made over the past year to conserve water and reduce your consumption? (select all that apply)*

N = 754; Q: *Have you made any changes over the past year to conserve water and reduce your consumption? If yes, what changes have you made?*

N = 72; Q: *If you have installed water-saving devices, please select which ones you have installed.*

N = 2 246; Q: *In the past year how many times have you checked for leaks on your property?*

N = 452; Q: *Does your business recycle or re-use water in any way?*

N = 436; Q: *If treated effluent (treated wastewater) was provided by the City at a lower cost compared to potable water, would you use this for non-drinking purposes?*

5.3. Prioritisation of resources

“Incentivise rainwater and greywater collection and use on domestic properties.”

Observatory resident in response to the question ‘Do you have any suggestions on how to improve water conservation?’

“Enforce Retrofit of all commercial buildings older than 25 years with new water-saving systems and sanitary fittings”

Zonnebloem resident in response to the question ‘Do you have any suggestions on how to improve water conservation?’

Most respondents agreed that it is important for the City to spend money to reduce leaks occurring on the water network. Intuitively, respondents prioritised spending money to reduce incidence of burst mains over spending money to reduce response times to burst mains and spending money to reduce repair time for burst mains. This, however, has significant cost implications as the prioritised spending choice is more expensive than the alternatives posited.

When asked to provide recommendations on how water conservation could be improved, the most commonly provided respondent inputs considered the following:

1. Continued public education campaigns
2. City supporting collection of rainwater with tanks at the household level
3. Harvesting of rainwater through the stormwater system
4. Encouraging water reuse/recycling/greywater utilisation
5. Greater enforcement of punitive measures (financial and legal/regulatory) against those deemed to be using excessive amounts of water
6. Quantitative restrictions on water provided to households
7. Provision of interventions to encourage water saving

6. METERING, BILLING AND COMMUNICATION

6.1. Metering and billing

“They must scan the meter instead of writing down digits”
 Ysterplaat resident in response to the question ‘Do you have any suggestions on how to improve billing and accounts issues?’

“Please educate us on how to calculate water bill. We might end up paying more than we actually should.”
 Macassar resident

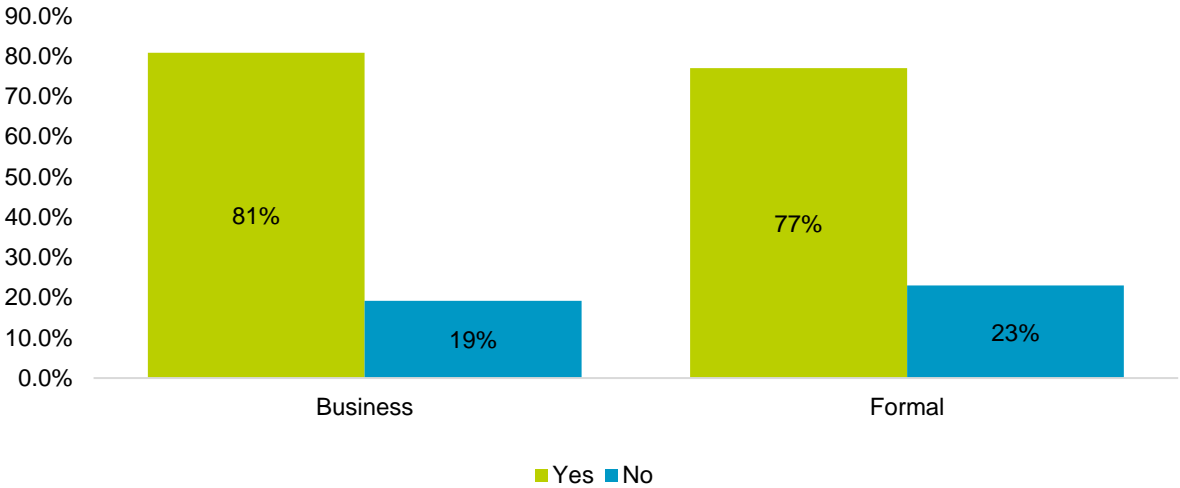


Figure 24 Is your water consumption accurately measured?

N = 2 153; Q: Do you receive a water bill at the end of every month? Does your business receive a water bill at the end of every month?


N = 2 147; Q: Do you think your water consumption is accurately measured? If no, why not?

An overwhelming majority of respondents feel that their water consumption as reflected in their municipal water bill is accurately measured. Of those who disagreed with this assertion, primary reasons cited included:

- Assuming the City would overcharge them
 - Generally due to mistrust in the City, with some respondents stating that they had previously approached the City regarding miscalculations and been vindicated
- Belief that meter reading was not done
 - Users indicated that their meter location (e.g. surrounded by dense bush or generally inaccessible) made it unlikely that City officials made readings

- In other cases, it was felt that the sub-par service provided by the City's meter-readers would not allow accurate meter readings to be taken consistently
- Bill not reflecting usage patterns
 - Included users who stated their bill remained the same even after prolonged periods of absence from their respective properties
- Bill not reflecting results of water-saving measures
 - Typically, frustrated users who felt that, despite concerted efforts on their behalf, their billed amount had remained largely constant
- Amount charged not matching respondents' meter reading
 - Respondents felt that since bills were based on estimates, they bore little fidelity to the on-the-ground reality
- Limited understanding of the billing process
- Respondents sharing a meter with other users
 - For example, households in a block of flats or businesses in an office park without access to sub-metering
 - Unlike the other reasons cited above, this would largely not be within the City's ambit

Table 12: Price Paid

	70% do not find it easy to understand the price/tariff paid for water
	63% do not feel the price paid for water is good value for money
	54% do not find it easy to understand how the use of water and sanitation services is calculated

N = 2 899; Q: How do you feel about the following statements? ...It is easy for me to understand how my use of water and sanitation has been calculated on my bill

N = 2 843; Q: How do you feel about the following statements?... It is easy for me to understand the price I pay for the water used/my bill is easy to understand/it is easy for me to understand the price/tariff my business pays for the water used

N" 2 680; Q: How do you feel about the following statements?... The price we pay for a water and sanitation service is good value for money

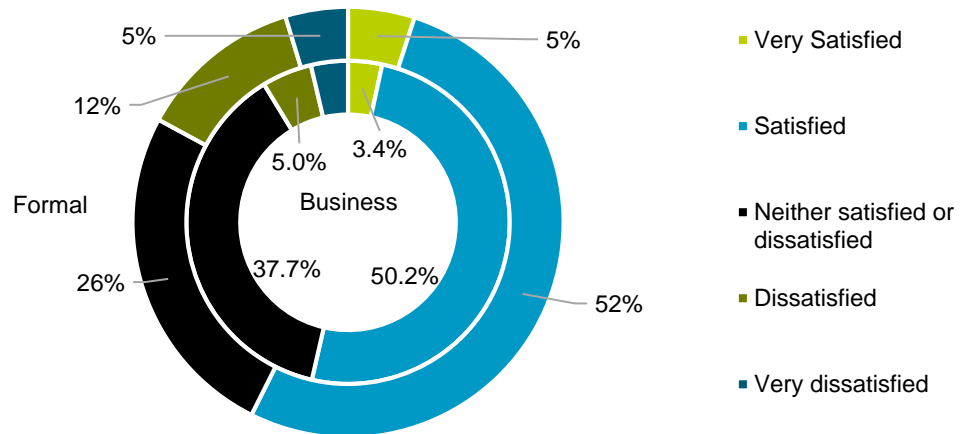


Figure 25 Satisfaction with the billing received from the City

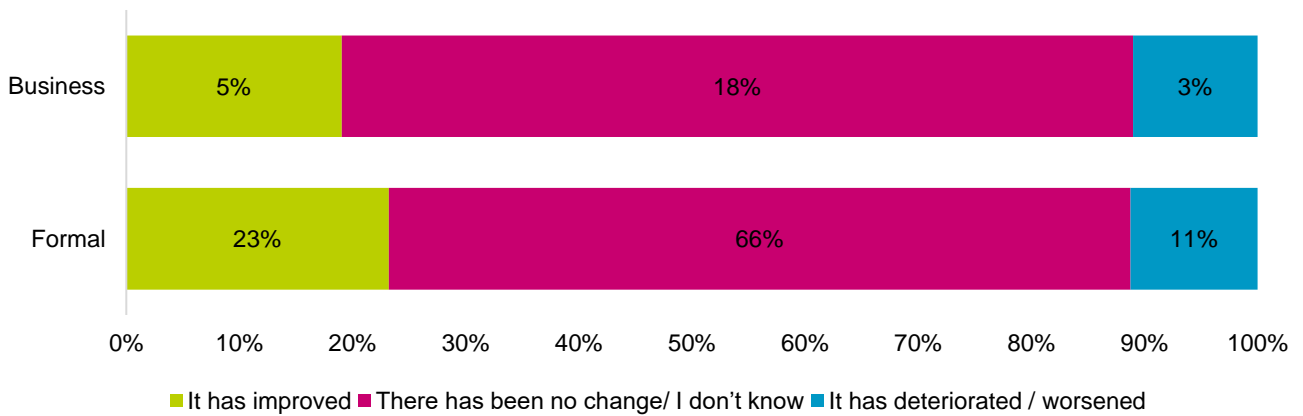


Figure 26 Perceived change over the past year: Billing and accounts

The majority of respondents find the billing process and outcome to be complicated. This is compounded by the fact that the majority do not consider the price they are paying for water to be good value for money. Despite this, the majority of respondents are satisfied with the amount charged and are of the opinion that the overall quality of billing and accounts has improved over the past year. Input from respondents on how to improve the billing and account included simplifying the bill and a transition from estimate-based billing.

N = 2 145; Q: In your opinion how satisfied are you now with the billing (i.e. amount charged) received from the City regarding water, sewage and stormwater services?

N = 2 167; Q: How has the overall quality of billing and accounts changed over the past year?

6.2. Communication



Figure 27 Example of Community meeting⁵⁴

“I don’t think it’s a case of printing more materials to distribute... (although graphics / infographics are far more effective in that realm)... Just pushing more info can only make a small difference, in my view... I would like to see you guys work smarter to try to change people’s behaviour... strategise by going to a grassroots level and finding the influential groups or individuals in areas.”

Rondebosch resident in response to the question, *“Do you have any suggestions how to improve communication?”*

“The city must not send contractors but come themselves to sort their own problems”

Gordon’s Bay resident

⁵⁴ Source: Urban-Econ, Credit: Nwabisa Mali

Table 13: Communication received by the City

	Informal	Formal	Business
	1. Radio	1. Newspaper	1. Newspaper
	2. Newspaper	2. Flyers and water bill	2. Flyers and water bill
	3. Billboards	3. Radio	3. Radio

N = 4 040; Q: What were the modes/types of communication you received (select all that apply)?

N = 1 452; Q: A planned interruption to water availability must be communicated to you two days before the water shutdown. Thinking about the last time your business was affected by a planned shutdown, how was this communicated?

Traditional mass media channels (newspapers, radio, radio) remain effective modes by which the City reaches all residents. Water bills are also still important means by which the City communicates with formal and business respondents⁵⁵. Despite this, 50%⁵⁶ of formal respondents and 37% of business respondents indicated that they had not received communication regarding a planned water availability interruption. As such, more direct means of communicating water availability interruptions may be considered as a remedy (e.g. SMS).

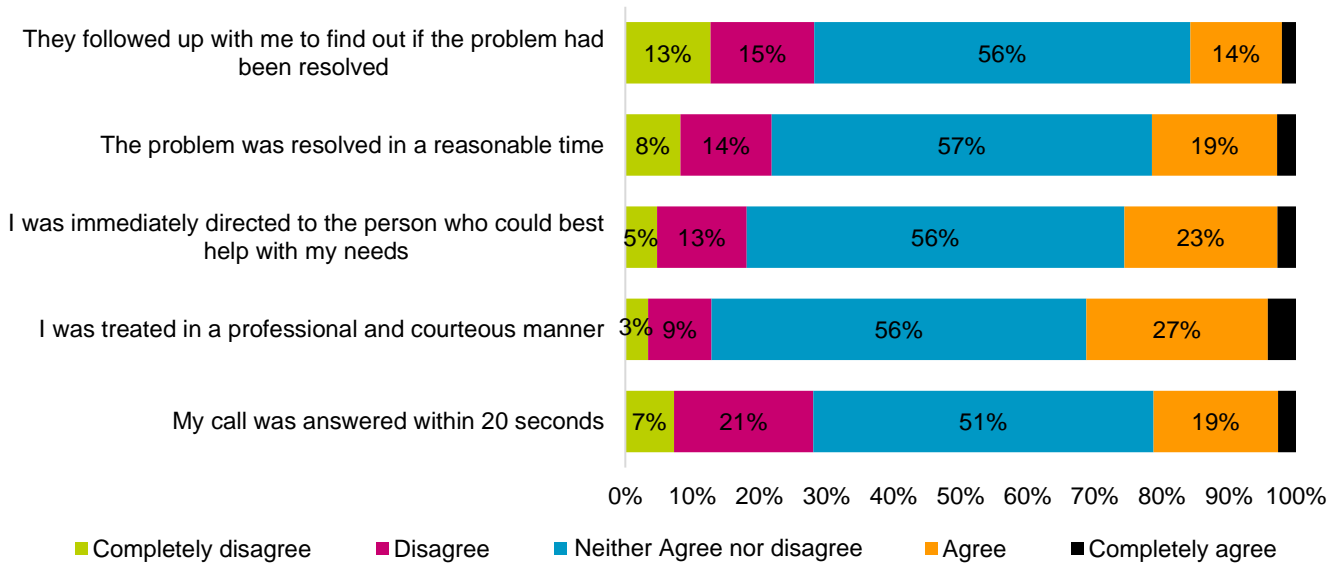


Figure 28 Satisfaction with service received: Communication

⁵⁵ In the previous edition of the CPSS, business respondents listed flyers and water bill as the top means by which the City should reach customers with messages about water and sanitation.

⁵⁶ This has been trending upwards. In the previous two editions of the CPSS, the percentage of formal households informed of planned interruptions was 45% and 44%.

*N = 2 133; Q: Thinking about the last time **you made contact** with the City regarding water, sewage or stormwater services, in your opinion how were you treated?*

The highest level of satisfaction for the various measures was on being treated in a professional and courteous manner (31%)⁵⁷. Over a quarter of respondents were of the opinion that their calls to the contact centre were not answered timeously. The City was rated poorly in terms of following up on complaints logged, with the largest percentage of respondents strongly disagreeing with the statement posed. This is a **recurring theme** that was also reflected in feedback for the water quality, stormwater and sewage sections of the CPSS and indicates an area for improvement.

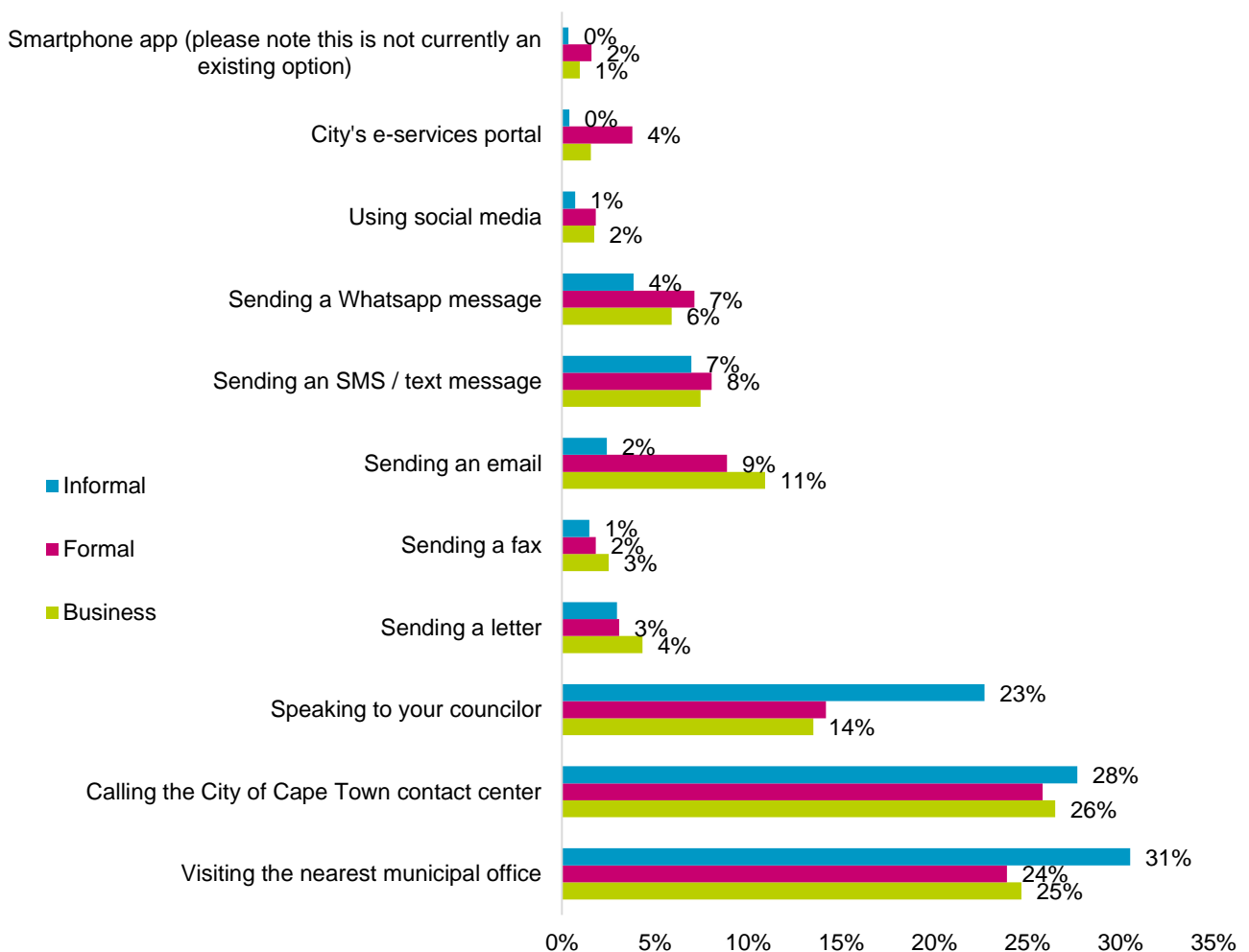


Figure 29 Preferred modes of communication

⁵⁷ It is, however, worth noting that this is down from the previous edition of the CPSS. Respondents' rating of the City on being directed to the correct person, follow-up and the problem being solved in a reasonable time is also **lower than in the previous edition of the CPSS**.

N = 3 417; Q: What are your preferred modes/types of communication when you communicate with the City?

N = 1 662; Q: As far as you are aware, was the local community consulted when decisions were taken about water and sanitation services in your area?

N = 2 173; Q: Are you familiar with e-Services? This is an online service to help you manage your municipal affairs and City Services. For example, you can submit your water-meter reading via e-Services each month.

The majority of respondents indicated that their preferred modes of communication with the City are through the contact centre and by visiting municipal offices. This affirms the belief that people prefer **dealing with a 'human'** entity that they can see and hear rather than the anonymised nature associated with other forms of communication.

The 'human element' is also reflected in a relatively high percentage of informal residents indicating that their third preference of communication channel is through their **councillor**. This may be explained by informal residents' feelings of social and economic disenfranchisement. Only 8% of informal respondents stated that their community had been consulted regarding water issues in the past year⁵⁸. The choice of councillors is telling; as informal residents chose this despite few having indicated that they currently communicate with the City through their councillor. This thus represents an unmet need. Whilst it may not be possible for councillors to directly interact with all their constituents, it is prudent for the City to consider the use of mechanisms such as street committees and ward committees as a means of engaging with residents.

The third preference for business respondents is through e-mail, reflecting the **time-sensitivity** of their activities, i.e. an entrepreneur may deem e-mailed communication a more time-efficient means than potentially being put on hold by a contact centre representative, or the time involved in driving to and queuing at municipal offices.

There is **inertia** in terms of adoption of 'modern' or 'digital' communication channels such as a smartphone app and the e-services portal. Preference for WhatsApp was relatively lower for informal respondents compared to business and formal respondents, which may be a function of economic barriers (cost of data, limited access to smartphones). Despite 39% of respondents indicating that they are aware of the e-services platform, only a miniscule percentage indicate a preference to use this in future, or a history of having used it in the past. Adoption of these modes would allow a more rapid transition towards 'smart-city' principles when dealing with the City's customers. These communication channels, when designed appropriately, may be associated with lower costs for the City, and greater

⁵⁸ In the previous CPSS 24% of informal respondents stated that they had been consulted regarding water issues

convenience for residents, resulting in a win-win outcome. Despite the presently low preference for these communication channels, it is possible that the City may promote adoption of WhatsApp, e-services and an app through various **behavioural ‘nudges’**.

How to improve communication: Channels

How to improve communication: Themes



Figure 30 Suggested improvements for communication

The font size of each text label in the above diagram is related to the frequency with which each item is mentioned i.e. the most frequently mentioned items have the largest font text labels.

N = 1 727; Q: Do you have any suggestions how to improve communication? (specifically mention what you would like to know more about in relation to water and sanitation. What info would you find useful?) e.g. educational materials

The majority of residents indicated that the City should continue with the use of mass media campaigns (TV, radio, billboards, posters, social media, pamphlets, etc.) as the primary means of communicating with residents. Direct communication through e-mail and municipal bills were indicated by businesses and formal residents as their second preference. Across all three groups, a significant cohort of respondents stated that they are currently satisfied with how the City’s communications were handled.

Informal residents indicated a strong preference for the City to communicate with them through councillors, community meetings, direct house visits, and community workers. While **resource-intensive**, these channels may be more effective than mass media campaigns in promoting behavioural change with this group.

The most commonly cited theme that respondents indicated would improve the City's communication to them was that of regular status/progress updates. These were largely in relation to current and future water supply, as well as the city's initiatives to address these supply issues. The second most commonly cited theme was that of educating the public. A sub-theme within this was for the City to target schools and young people as **agents of change** within their household units. Improved responsiveness to complaints in the City's direct communication with residents was once again cited as an important issue to be addressed.

6.3. Knowledge, attitudes and perceptions

“The COCT cannot do everything with limited resources, citizens must take responsibility and assist

Tableview resident in response to the question, *“Do you have any suggestions on how to improve the stormwater services we provide you?”*

“Target schools to teach kids then they will also inform their house holds”

Litha Park resident in response to the question *“Do you have any suggestions on how to improve water conservation?”*

Table 14: Agreement with various statements

Statement	Informal	Formal	Business
There is enough water available for the City, so we don't have to worry about how much we use	34%	26%	24%
The tap water in Cape Town is safe to drink	46%	52%	47%
The supply of tap water in Cape Town is reliable	47%	55%	51%
The way in which the City manages water and sanitation services helps to save the environment	38%	45%	48%
The rivers in Cape Town are polluted	40%	46%	42%
Most people/businesses I know are conscious of conserving water	35%	45%	46%
Water restrictions are necessary to help conserve water	44%	55%	56%
If I had a choice, I would choose the City as my water and sanitation service provider (as opposed to another public provider, a private provider or self-supply, etc.)	37%	45%	46%

N = 4 048; Q: How do you feel about the following statements?

Less than half of the informal and business respondents believe that the water in Cape Town is safe to drink. As a result, 49% of business respondents indicated that they use bottled or borehole/well point water for drinking purpose. Informal respondents would typically struggle to afford **access to bottled and borehole/well point water**. Despite indicating that they did not feel that tap water in Cape Town was safe to drink, only 4% of informal residents indicated that they treat their water, the majority of them doing so by boiling it.

The low percentage of respondents indicating that they believe the supply of water is reliable may be due to over two thirds also believing that the City has insufficient water available, this in turn probably due to the recent drought and the **awareness around water scarcity** this would have raised. Worryingly, over half of all respondents felt that the way the City manages Water and Sanitation services was not beneficial to the environment.

The high percentage of respondents who stated that other people they know are not conscious of conserving water may be due to cognitive bias (illusory superiority) where **individuals' perception of the self-versus the aggregate is not always objective**. Whilst this was not tested, it is however worth noting that this sentiment was highest amongst informal respondents. This sentiment may be informed by observation of peers' behaviour at communal infrastructure such as shared standpipes.

Less than half of respondents indicated that the CCT would be their service provider of choice if alternatives were available, with only 42% of businesses stating that it is easy to do business with the City. This indicates **low levels of trust amongst** respondents, particularly informal respondents. This is further reflected in informal respondents being the only group where the majority felt that water restrictions were not necessary to help conserve water.

The low percentage of total respondents indicating agreement with water restrictions may be contrasted with the relatively high percentage of total respondents indicating that they felt the drought and Day Zero messaging had been successful. There is thus some **dissonance, with residents seemingly of the opinion that whilst water scarcity was an important issue, water restrictions may not be the best means of addressing this scarcity**. It is thus important that either measures to increase acceptance of restrictions be implemented, or alternate means of addressing water scarcity (e.g. encouraging rainwater collection and greywater use) be prioritised.

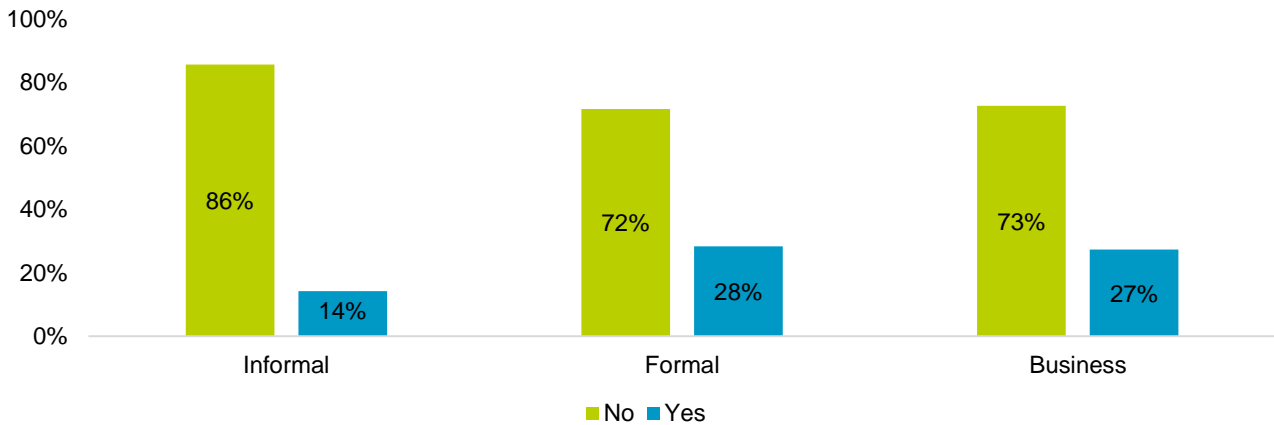



Figure 31: Awareness of WSD customer services charter

N = 3 993; Q: Are you aware of the Water and Sanitation Department Customer Services Charter?

Awareness of the WSD customer services charter is universally low across all groups, acutely so for informal residents. This may result in customers not being empowered in terms of knowing what their rights are regarding service delivery standards from the City. With less than a third of total respondents aware of by-laws, this may result in unintentional violations, particularly relating to stormwater and effluent. An example of this is seen in how 31% of respondents (the majority informal and business) erroneously believing that fats, oils, grease, motor oil and paint are permitted to flow into stormwater drains or wastewater sewers. The **gravity of the misconception is contextualised when consideration is made** of the fact that businesses (38% of which held this belief) would typically handle hazardous materials such as oils and paints more frequently than households.

Table 15: Awareness of applicable by-laws

	Informal	Formal	Business
	13% know of at least 1 by-law	32% know of at least 1 by-law	33% know of at least 1 by-law
	Across all 3 groups awareness was highest for water by-law, followed by stormwater by-law, with awareness lowest for effluent by-law		

N = 3 889; Q: Are you aware of the following city local by-laws?

N = 4 048; Q: Please indicate if the following are true or false statements. Fats, oils, grease, motor oil and paint are not permitted to flow into a stormwater drain or a wastewater sewer.

7. POTENTIAL RECOMMENDATIONS FOR CONSIDERATION

7.1. Synthesis of findings

Table 16: Synthesis of findings

Section	Synopsis
Drinking water and water quality	<p>Complaints: Majority regarding leaks and supply disruptions</p> <p>Suggestions from respondents on how to improve service: Majority regarding pressure management and water cleanliness</p> <p>Informal: Low satisfaction levels for water availability</p> <p>Informal: Majority of users do not know daily water allocation</p> <p>Formal: Low uptake of compliant signage for boreholes</p> <p>Business: Water quality and pressure indicated at top priorities⁵⁹ City needs to focus on to help improve overall service provided</p>
Sewage and wastewater	<p>Complaints: Majority regarding blocked sewers/overflowing manholes and blocked property drains</p> <p>Suggestions from respondents on how to improve service: Upkeep of drains and pipes</p> <p>Informal: Increase in supply of toilets and improved upkeep of existing toilets</p>
Stormwater	<p>Complaints: Blocked catchpit and flooded property/roads</p> <p>Complaints: 75% of respondents not satisfied with City response</p> <p>Rivers, streams, canals, wetlands and ponds: low satisfaction levels with current state, limited use of aquatic resources, low awareness of their location and limited participation in associated community groups</p>
Water conservation	<p>Drought campaign and Day Zero messaging: Majority considered as successful - radio and newspapers as most important communication mediums</p> <p>Water management devices: majority satisfied with information provided by City</p> <p>Informal: lowest stated reduction in water use relative to a year prior, when compared to business and formal</p> <p>Business: 54% likely to use treated effluent for non-drinking purposes if provided by City at lower cost</p>

⁵⁹ N = 458; Q: As a business, what are your top three priorities that the City needs to focus on to help improve the water and sanitation service we provide you?

	<p>Suggestions from respondents on how to improve service: continued public education, city-supported collection of rainwater with tanks by households, harvesting of rainwater through stormwater system</p>
Metering and billing	<p>Measurement: consumption considered accurate by majority</p> <p>Pricing: 70% do not find it easy to understand tariff paid</p> <p>Suggestions from respondents on how to improve service: simplify billing and transition from estimate-based billing</p>
Communication	<p>Received: radio and newspaper as important channels for the City to communicate with resident</p> <p>Planned interruptions: prior notification not received by 37% of businesses and 50% of formal</p> <p>Preferred means to contact City: calling contact centre and visiting municipal offices</p> <p>Preferred means to contact City: informal respondents expressed preference for use of councillor, despite this channel not being utilised currently</p> <p>Preferred means to contact City: low preference for 'digital' channels such as WhatsApp, e-services and smartphone app</p> <p>Suggestions from respondents on how to improve service: mass media campaigns, councillors, community meetings as channel to use</p> <p>Suggestions from respondents on how to improve service: regular status updates, public education drives and improved responsiveness as recurring themes</p>
Overall	<p>Results on complaints not being addressed timeously are corroborated by ageing analysis of WSD C3 notifications logged with the City⁶⁰. This points to a need to be more responsive to the needs of all users, and communicating with consumers when such needs cannot be met to their expectations.</p> <p>The drought campaign and day-zero afforded the City an opportunity to create a sense of shared civic responsibility centred on a common objective. Lessons can be drawn from this on how to foster this shared civic responsibility (2-fold, with active involvement by both the City and its residents) in other aspects of water use.</p> <p>Resource allocation for upgrade, expansion and maintenance of infrastructure and service offerings will always fall short of needs, and wants, creating value gaps in</p>

⁶⁰ CCT, 2019. Top 10 Water related Service requests: October 2017 to March 2019. Unpublished internal document.

	<p>perception and satisfaction. Communication can, should and does play an important role in mediating this value gap. This involves:</p> <ul style="list-style-type: none"> • Ensuring that residents' voices are heard and acknowledged • Informing residents of what the City is doing and has done • Creating and managing expectations <p>The above requires effective multidirectional and multichannel communication by the City.</p>
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7.2. Potential interventions for consideration

Based on the findings the following recommendations are made:

- **Drinking water and water quality**
 - Improved handling of leaks and supply issues affecting informal residents
 - Increased supply of standpipes

- **Sewage and wastewater**
 - Increased supply of toilets and improved maintenance of toilets for informal residents
 - More frequent infrastructure maintenance to prevent blocked sewers and drains
 - Encouraging re-use by provision of treated effluent to more business (and possibly households also)
 - In this regard, effluent would need to meet requirements (e.g. Total Dissolved Solids) of different users such as irrigation and construction entities
 - It is also recognised that this would be dependent on available supply from Wastewater Treatment Works

- **Stormwater**
 - Long term: Study into feasibility of capturing rainwater through stormwater system
 - Greater resource allocation towards upkeep of rivers, streams, wetlands, ponds and canals. Community action groups may be leveraged as a citizen-driven means of assisting the department with service delivery (e.g. through organising clean-ups and reporting illegal activity taking place at sites of natural aquatic resources)

- **Water conservation**
 - Continued public education
 - Study into feasibility of supporting collection of rainwater in tanks by households

- **Metering and billing**
 - Simplification of WSD section of municipal bill sent to customers

- **Communication**
 - Use of SMS as possible means of increasing resident awareness of planned interruption
 - Greater use of street committees, community meetings, community development workers and other similar means as a proxy for informal respondents to have contact with their ward councillor
 - Targeting of schools when undertaking public education drives
 - Communication to residents to clarify mixed perceptions regarding
 - Meter readings (frequency of readings, what is expected of a meter reader, use of estimates when calculating bills, etc.)
 - Water pressure (what is an acceptable level, and what right users have when supply goes below this threshold)




- **Broader WSD-level**
 - Improved handling of complaints by communicating to respondents what stage or step their complaint is currently at with updates
 - Improved responsiveness to complaints through follow-up with residents
 - Ongoing monitoring of C3 notification system as a means of tracking 'trouble areas', both in terms of WSD subsections with high prevalence of complaints, and also notifications that exceed timelines indicated in the WSD charter
 - In this regard it is recognised that the current SAP system's timelines do not allow for direct comparison with the WSD charter timelines. It is suggested that the Customer Services Branch take a leadership role.
 - Promoting behavioural change based on communication, pricing, infrastructure design and incentive systems that seek to alter knowledge, attitudes and practices to more civic-oriented attitudes in residents. This requires constant evaluation of initiatives, campaigns and existing-practice to ensure that the **assumed results chain** from inputs-activities-outputs-outcomes-impacts applies in the real-world.

- **Broader city-level**
 - Design and use of appropriate incentive structures to 'nudge' behaviours of users towards greater use of digital mediums such as e-services, WhatsApp and smartphone app when communicating with City.

7.3. Conclusion

The survey revealed several findings of interest to different constituencies including residents, businesses and City stakeholders. From these findings, certain insights emerge, and these are summarised through the 'Stop, Start, Continue' rubric:

Table 17: 'Stop, Start, Continue' rubric

<p>Stop</p> 	<ul style="list-style-type: none"> • Demonstrating investments to drive goodwill • Digital-first mindset • Fit for-purpose communications • Educational interventions • Infrastructure maintenance • Infrastructure roll-outs
<p>Continue</p> 	<ul style="list-style-type: none"> • Believing in the notion that utilities should be invisible • Seeing water as only an engineer's playground • Feelings, emotions matter as much as the physical reality
<p>Start</p> 	<ul style="list-style-type: none"> • Journey mapping • Not just pain points in touch points • Totality of experience • Realising that the customer's perception is your reality • Agile campaigns • Considering difference between • Value vs Expectation • Leveraging knowledge and wisdom of 'coal-face' staff • Field operations • Contact centre

Whilst the City has and continues to invest significant amounts of money into the upgrade, expansion and maintenance of water-service delivery related infrastructure, this is often not known by most residents and businesses. This information is typically contained in City publications such as the IDP, budget and annual report. A majority of residents and businesses however often do not generally engage with such documentation (unless they have specific interests or have a high level of civic responsibility).

With this considered, it is important that the City communicate to residents and businesses on its spending committed towards sustaining and improving the quality of water service delivered. This may be through mechanisms such as municipal bills (as a 'did you know...' type statistic) and community meetings. Such information may best be tailored towards specific geographic areas or user groups. This in turn requires fit-for purpose communications tailored towards educating customers on what the City has undertaken and is planning to do in the short-to-medium term horizon. Demonstrating investments made by the City may drive goodwill and dissipate sentiments typified by the statement 'the City never does anything to help us'.

The digital-first mindset refers to transitioning customers towards greater use of platforms such as e-services, whatsapp, email or a dedicated 'app'. These platforms may allow more intuitive and interactive means of engaging with customers and visually mapping the customer journey. Journey mapping a systematic consideration of all the interactions customers have with the City, these possibly including but not limited to:

1. Issue identification
2. Looking for information online
3. Calling a contact centre
4. Being directed to the relevant person
5. Receiving a reference number
6. Having a field or internal team work on the issue raised
7. Possibly being billed for services rendered
8. Issue resolution or escalation or avoidance or internalisation

The customer may thus be imagined as taking a journey through various touch points with the City from the initial issue identification up to the issue being resolved, escalated, avoided or internalised (The last two referring to instances where the customer feels the issue has not been resolved but decides to not pursue it further). Journey mapping allow the City to consider not just points where the customer is dissatisfied (pain points) but the totality of the experience. This is important as it aims towards satisfaction at all points of interaction with the customer (as pain points may be relative or subjective, and thus not universal to all customers).

Inherent in these approaches is the understanding that whilst the City's performance in objective and standardised metrics such as the 'blue drop' may be satisfactory (according to DWAS, SANS or other specifications), this does not necessarily translate into customer satisfaction. From this perspective, understanding the gaps between what is expected (considerations of quality and value being important here) and what is received (service delivery) is crucial. Surveys such as CPSS aid in developing this understanding, and may in future be supplemented by activities such as:

- Customer Focus Group discussions to gain deeper understanding of the gap between perception and reality
- Tapping into the first-hand experience of customer facing WSD staff to find out more about what customers consider to be important

“Amongst all the pressures I think the city is doing well!”

Brackenfell resident in response to the question, “Do you have any suggestions on how to improve the municipal water service we provide you?”

“I don’t know how, but the citizens of Cape town need to be reminded of their civic responsibilities”

Kirstenhof resident

For any queries regarding the content of this report, or to find out about other activities undertaken by the City Water and Sanitation Department’s Business Improvement and Innovation unit please contact:

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