



# **Water and sanitation service delivery at the Emfuleni local municipality**

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Mini-dissertation accepted in partial fulfilment of the requirements for the degree *Master of Business Administration* at the North-West University

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## DECLARATION

I, JT Mathunzi, declare that this study, titled, 'Water and sanitation delivery at the Emfuleni Local Municipality, is my original work. This dissertation has not been submitted for a degree at this or any other university. All materials used in the study have been duly indicated and acknowledged through references.

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Signed

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Date

## **ACKNOWLEDGEMENTS**

I would like to acknowledge my supervisor, Dr Bertus le Roux for the guidance, help, encouragement and support in carrying out this research project.

My gratitude also goes to all the Emfuleni Local Municipality (Metsi-a-Lekoa) management and operational staff for sacrificing their time to assist me with responses in interview questionnaires that I needed to complete this research dissertation.

My daughter, Lehlogonolo Lesedi Mathunzi, for enduring days without my attention when I was away from home attending block lessons and completing the research report.

Lastly, my brothers Fannie, Thabiso, Lehlohonolo Mathunzi and my late brother Thusa Mathunzi, who endured the many hours I spent outside the family circle.

## **DEDICATION**

I also want to thank the Almighty God for giving me life and the opportunity to pursue my studies.

I dedicate this research report to my parents, especially my late mother Languta Gladys Mathunzi, for the love, support, sacrifice, understanding and encouragement she gave me while I was studying and attending lectures. She gave me hope when I was down. She was my mentor and confidante throughout my entire MBA study period. In addition, my late father Sekoti Robert Mathunzi, for the love, support, sacrifice, understanding and encouragement he gave me through my tertiary studies. Even through the toughest times, I managed to pull through with their love and support. May their souls rest in eternal peace.

## **LIST OF ACRONYMS**

DHS	Demographic and Health Survey
DWS	Department of Water and Sanitation
HR	Human Resources
IDP	Integrated Development Plan
NGO	Non-profit Organisation
O & M	Operations and Maintenance
RSA	Republic of South Africa
SCM	Supply Chain Management Unit
SDBIP	Service Delivery Budget implementation Plan
SSA	Sub-Saharan Africa
WMS	Water Management System
WSA	Water Services Authority
WWTW	Wastewater Treatment Works

## ABSTRACT

Local municipalities in South Africa have been battling to provide equitable services to the residents and this has been a much-deliberated issue. This study investigated water and sanitation delivery in the Emfuleni Local Municipality. The sub-aims of this study investigated the structural composition of water and sanitation management, the status quo of water and sanitation service delivery management, the factors that affect the sustainable delivery of water and sanitation, and the measures to enhance water and sanitation service delivery at Emfuleni Local Municipality. The systems theory and the decision-making theory underpinned this study, which specified the need for departments to work in unison to achieve stated objectives and the relevance of making logical choices when selecting among alternatives. The qualitative research approach and exploratory research design were selected for this study and enhanced in-depth findings through interviewing twenty-nine (29) purposively selected participants in this study. Atlas.ti Software (version 8.2) was used to analyse data collected from the participants. Themes and categories emerged from the study and these were discussed adequately by corroborating it with the literature review outcomes in a view to finding solutions to the study. Major findings obtained from the study indicated that Emfuleni Local Municipality does not provide adequate water and sanitation delivery to the residents due to budget implementation plan issues, water management response issues, limited supply of water resources, lack of training, the poor state of infrastructure, poor implementation of legislative frameworks, financial management issues, inability to update service development plans, as well as lack of skills and strategic leadership issues. The study recommended that municipal employees should collaborate with residents, conduct awareness campaigns, promote emerging innovation options and communication dynamics, install leak monitoring and detection sensory machines, ensure the maintenance of infrastructure, apply service legislation, and promote effective strategic/financial management in an endeavour to enhance water and sanitation service delivery in the municipality.

**Keywords:** municipality; water and sanitation service delivery; challenges to service delivery; communication dynamics; innovation, residents

## TABLE OF CONTENTS

<b>Declaration.....</b>	<b>ii</b>
<b>Acknowledgements .....</b>	<b>ii</b>
<b>Dedication .....</b>	<b>iii</b>
<b>List of acronyms.....</b>	<b>iv</b>
<b>Abstract.....</b>	<b>v</b>
<b>Table of contents .....</b>	<b>vi</b>
<b>List of figures.....</b>	<b>x</b>
<b>List of tables.....</b>	<b>xi</b>
<b>CHAPTER 1 .....</b>	<b>1</b>
<b>INTRODUCTION AND BACKGROUND OF THE STUDY .....</b>	<b>1</b>
1.1 Introduction .....	1
1.2 Background of the study .....	2
1.3 Problem statement .....	3
1.4 Research aims.....	5
1.5 Research questions .....	5
1.6 Research objectives .....	5
1.7 Importance and benefits of the study .....	6
1.8 Delimitations and assumptions of the study.....	7
1.9 Research methodology .....	7
1.10 Concept clarification.....	7
1.11 Chapter layout.....	8
<b>CHAPTER 2 .....</b>	<b>9</b>
<b>THEORETICAL FRAMEWORK AND LITERATURE REVIEW .....</b>	<b>9</b>
2.1 Introduction .....	9
2.1 Theoretical framework .....	10
2.1.1 Systems theory .....	10
2.1.2 Decision-making theory .....	11
2.3 Literature review .....	12
2.4 Legislation guiding municipal service provision .....	13
2.4.1 The Constitution of Republic of South Africa (108 of 1996) .....	13

2.4.2	Water Services Act (108 of 1997).....	14
2.4.3	National Water Act (36 of 1998).....	14
2.4.4	National Environmental Management Act, 107 of 1998 (nema).....	15
2.4.5	National Health Act (61 of 2003).....	15
2.4.6	South African Drinking Water Quality Framework.....	16
2.4.7	Integrated Development Plan (IDP).....	16
2.5	Emfuleni local municipality structure.....	17
2.5.1	The chief director.....	17
2.5.2	Sectional managers.....	18
2.5.3	Technical assistants.....	19
2.6	Factors affecting the sustainable provision of water and sanitation service delivery.....	19
2.6.1	Population growth and climate change.....	20
2.6.2	Infrastructural condition.....	21
2.6.3	Wastewater treatment.....	21
2.6.4	Limited supply of water resources.....	22
2.6.5	Financial management.....	22
2.6.6	Lack of proper implementation of service delivery legislation.....	23
2.6.7	Leadership issues.....	23
2.6.8	Lack of skills.....	24
2.6.9	Lack of training.....	24
2.7.	Communication and service delivery.....	25
2.7.1	Merits of communication.....	26
2.7.2	Methods of communication.....	27
2.8	Innovation and service delivery.....	29
2.8.1	Merits of innovation.....	30
2.8.2	Barriers to public sector innovation.....	30
2.9	Strategic management and service delivery.....	31
2.9.1	Advantages of strategic management.....	32
2.10	Chapter summary.....	33
<b>CHAPTER 3.....</b>		<b>34</b>
<b>RESEARCH METHODOLOGY.....</b>		<b>34</b>
3.1	Introduction.....	34
3.2	Research paradigm.....	34
3.3	Research approach.....	35

3.4	Research design.....	35
3.5	Site selection .....	37
3.6	Participant selection .....	37
3.7	Data collecting instruments.....	38
3.7.1	Researcher’s role.....	38
3.8	Data analysis .....	39
3.9	Trustworthiness of the study .....	40
3.10	Ethical considerations .....	41
3.11	Chapter summary .....	41
<b>CHAPTER 4.....</b>		<b>42</b>
<b>PRESENTATION OF RESEARCH RESULTS .....</b>		<b>42</b>
4.1	Introduction .....	42
4.2	Presentation of results .....	42
4.3	Presentation of biographical information of participants.....	42
4.3.1	Gender of the participants .....	42
4.3.2	Age group.....	43
4.3.3	Race.....	43
4.3.4	Years of experience.....	44
4.3.5	Highest qualification in education.....	45
4.4	Presentation of responses from research objectives.....	45
4.4.1	Participants’ responses on research objective 1 .....	46
4.4.2	Participants’ response to research objective 2.....	48
4.4.3	Participants’ responses to research objective 3 .....	50
4.4.4	Participants’ response to research objective 4.....	59
4.5	Chapter summary .....	63
<b>CHAPTER 5.....</b>		<b>64</b>
<b>OVERVIEW, CONCLUSIONS AND RECOMMENDATIONS .....</b>		<b>64</b>
5.1	Introduction .....	64
5.2	Overview of the study .....	64
5.3	Summary of findings.....	65
5.3.1	To understand the structural composition of water and sanitation management in emfuleni local municipality .....	65

5.3.2 To know the status quo of water and sanitation service delivery at emfuleni local municipality. ....	66
5.3.3 To peruse the factors that affect the sustainable delivery of water and sanitation service in a municipality .....	66
5.3.1 To peruse measures to enhance water and sanitation service delivery at the emfuleni local municipality.....	66
5.4 Recommendations of the study .....	67
5.4.1 Theoretical recommendations .....	67
5.4.2 Recommendations to the municipal workers .....	67
5.4.3 Recommendations to the residents .....	68
5.5 Conclusion.....	69
<b>References.....</b>	<b>70</b>
<b>Appendix A: Interview guide for council municipal workers .....</b>	<b>79</b>
<b>Appendix B:Consolidated results .....</b>	<b>83</b>
<b>Appendix C:Ethical clearance approval.....</b>	<b>90</b>
<b>Appendix D:Approval to conduct research.....</b>	<b>92</b>

## LIST OF FIGURES

Figure 2.1:	C Revenue enhancement model .....	11
Figure 2.2	Decision-making theory.....	12
Figure 2.3	The structure of Emfuleni local municipality water and sanitation delivery.....	18
Figure 2.4:	Communication process.....	26
Figure 2.5:	Public sector innovation.....	31
Figure 4.1:	Emfuleni Municipal water and sanitation delivery structure.....	46
Figure 4.2:	The status quo of water and sanitation delivery at Emfuleni Municipality.....	48
Figure 4.3:	Results of poor water and sanitation delivery at Emfuleni Local Municipality.	49
Figure 4.4	Factors affecting the delivery of water and sanitation in Emfuleni Municipality.....	51
Figure 4.5	Measures to enhance water and sanitation delivery at Emfuleni Municipality.	59

## LIST OF TABLES

Table 3.1:	The alignment of research aims, questions and data collection instruments.....	37
Table 3.2	Data analytical steps.....	40
Table 4.1	Gender.....	43
Table 4.2	Age groups.....	43
Table 4.3:	Racial background.....	44
Table 4.4	Years of experience.....	44
Table 4.5	Highest academic qualification.....	45

## **CHAPTER 1**

### **INTRODUCTION AND BACKGROUND OF THE STUDY**

#### **1.1 Introduction**

Emfuleni Local Municipality will succeed in delivering equitable water and sanitation mandates if the municipal employees will embark on successful implementation plans to mobilise revenue from consumers, implement a holistic water conservation programme, and demand management programmes. Water and sanitation service delivery in Emfuleni Local Municipality in the Gauteng Province has been a disputed issue among residents as water provision service is crucial for their well-being and daily lives of the residents (Mleya, 2016:1). The Constitution of South Africa, Section 152(b) stipulates that local municipalities are the fundamental components of government based on their responsibility to ensure that there is sustainable provision of essential services such as water supply and sanitation services. This section of the constitution further stated that local municipalities must provide equitable services to communities in a more sustainable way. The fundamental characteristics of the responsibilities of local municipalities are affirmed as ensuring the preservation of human dignity and life.

Provision of sustainable services places a huge responsibility to the local municipalities to ensure that water services such as supplying and distribution of potable drinking water and proper sanitation systems for collection and treatment of sewages are being maintained according to the Department of Water and Sanitation Regulations, Water Use Licence, Water Services Acts, and Water Services Development Plan (WSDP). The Constitution of South Africa gives local government the responsibility of ensuring the mobilisation of capital resources (economically) concerning the improvement of livelihoods of its citizens. According to Statistics South Africa (2017:8), basic services such as water supply and sanitation services are vital to improving quality of life, wellbeing, and human dignity to communities. The municipality's failure to provide these services will have a negative impact on economic and social development.

Chapter 5 of the Municipal Structures Act (117 of 1998) grouped Municipalities based on their key powers and duties. As defined by Section 155 of the South African Constitution, Chapter 5 of the Municipal Structures Act (117 of 1998) defines the nature of service delivery that should be given by the municipalities. Local municipalities (Category B) are the closest to communities in terms of providing sustainable water services such as water supply and

sanitation collection services to the residents. Due to service backlogs, service delivery protects and poor service delivery witnessed in Emfuleni local municipality, this study is aimed at identifying the key challenges that impact water supply and sanitation service delivery and to gather employees' views and inputs regarding the implications to poor service delivery.

## **1.2 Background of the study**

In South Africa, the water sector comprises two sub-sectors, which entail of the water resource management sector regulated by the National Water Act No. 36 of 1998 and water provision sector governed by the Water Services Act No.108 of 1997. According to the National Water Act (36 of 1998), the Department of Water and Sanitation, through government, is liable for realising a sustainable utilisation of water resources for the benefit of all consumers in South Africa. The Water Services Act (108 of 1997) recognises the right to basic services that entail the water supply and sanitation services to ensure adequate water provision and to prevent an environment that is detrimental to the safety and health of individuals in South Africa. The Department of Water and Sanitation leads other domains such as the district municipalities, local municipalities, and water boards with regulations and policies. The National Water Act (36 of 1998) further states that government spheres such as the Department of Water and Sanitation (DWS) and local municipalities have to serve communities as water service provider (WSP) and/or water services authority (WSA). Based on the aforementioned legislation, the basic services duties for sustainable water services lie on the path of the local municipalities. The national objectives of the South African government are to ensure that all South Africans have access to basic water services (Manyaka, 2014:128). The South African Development Plan (2011:159) indicates that inadequate access of water to communities may be due to poor maintenance of existing infrastructure, insufficient bulk water infrastructure, poor municipal service delivery including the households that cannot manage to pay for services provided by the municipality. Local municipalities should endeavour to organise their governance, planning and budgeting in a way that prioritises the basic needs and fosters the social and economic growth of their residents.

Some households have access to tap water in local South African municipalities, but some fetch water from rivers, dams, streams, springs or wells. The South African government has stipulated to the municipalities that 25 litres per person per day or 6 000 kilolitres per household per month would be the minimum amount of drinking water. The free basic water services

provided by the municipality benefit only over a third of the customers. In 2002, less than two-thirds of South African households had access to better-quality sanitation facilities known as flush toilets linked to a public sewage system or septic tank or a ventilation pipe pit toilet. In 2017, service increased to 82 per cent. Yet, in 2017, there were still 62 042 units provided by municipalities using the bucket toilet system. While increasing access to water and sanitation facilities, the numbers of households' content with the water services they receive have been steadily decreasing. Illustrated by the several number of service delivery protests, households are becoming gradually dissatisfied with the reliability, access, and quantity of water supply interruptions.

Marivete (2014:57) and Khale (2015:680) maintain that residents embark on service delivery demonstrations due to dissatisfaction of delivery of inadequate services. This uprising has been intensified over the years and affirms that 173 protests were recorded in 2012, 155 in 2013, 191 in 2014, 164 in 2015, 137 in 2016, 173 in 2017 and 237 in 2018. Concerning these protests, it is reported that some municipal water services authorities do not have adequate water infrastructure maintenance plans. Most municipalities have failed to perform any conditional infrastructure assessments to advance their plans and budgets. The witnessed failure of municipalities to engage in proper strategic management has left most municipalities exposed to crisis management. For example, in Emfuleni Local Municipality, maintenance is rarely taken as a cultural practice. Yet, as a result of severe resources constraints, Emfuleni Municipality has been faced with a significant backlog in the infrastructure maintenance and reconstruction required to provide equitable potable water and sanitation services. Insufficient oversight and supervision of contractors, preparation, and poor quality of workmanship contribute to unnecessary delays in projects. Another big concern in Emfuleni Local Municipality is the poor condition of wastewater treatment. However, no data have been published about their state, but reports of untreated waste flooding into key strategic water bodies have increased, thereby seriously compromising water quality. Recently, the national government interfered in the pollution crisis in the Vaal River, mobilising the military to assist engineering and other expertise. These issues witnessed in Emfuleni Local Municipality motivated this study.

### **1.3 Problem statement**

According to Bevan-Dye, de Klerk and Moletsane (2014:281), South African municipalities have received substantial attention recently that includes public expression of frustration

through demonstrations about unsatisfactory service delivery. According to section 27 of the Constitution, municipalities must ensure service delivery provision is through sustaining communities' basic needs. The South African government has been receiving negative reports from her citizens concerning service delivery and the abilities of its municipalities to provide basic services such as water supply and sanitation services to its communities (Brettigny & Sharp, 2016:11). The level of dissatisfaction with services has led to several protests and riots such as in 2016, 2017, 2018, 2019 and 2020. The community of Boiketlong in Emfuleni Municipality (Vaal Triangle) have, on several occasions, barricaded the streets of Moshoeshoe and Waterdal due dissatisfaction with service delivery. The community protests and riots in most places tend to result in vandalism of municipal infrastructure and assets such as municipal buildings, streetlights and roads (Sowetan, 2016).

Kanyane (2014:90) indicates that communities engage in riots and protests in a hope to try to and raise their voices and change current challenges that the municipalities are experiencing. Most South African municipalities are experiencing pressure to react to community basic water services needs such as water supply and sanitation collection services, not overlooking that some of the residents (water consumers and property owners) are not willing to pay for their municipal bill, which includes rates and taxes, water consumption and sanitation service fees. In most cases, these issues result in most municipalities not being able to execute their obligation of providing the basic needs of their communities. Statistics South Africa (2017:8) points out that "the ability of most municipalities to provide basic services may be influenced by the income distribution of households" within the municipal jurisdiction. It further states that unemployment and poverty play a vital role as it contextualises the ability of residents to pay for provided services, and it implicates the obligations of municipalities in collecting revenue enhancement that results in non-compliance of meeting the obligation of a provision of basic services to citizens.

Currently, Emfuleni Local Municipality has been experiencing riots and protests by residents due to its inability to deliver basic services, particularly water and sanitation services. These have led to the Municipality receiving a bad reputation and negative media exposure for poor performance in terms of provision of service delivery in its area of jurisdiction. Consequently, there was a necessity to investigate what are the factors that affect water and sanitation service delivery in the Municipality, as well as gaining more knowledge and understanding on the relationship between resources and service delivery at the municipality (Chabalala, 2017). The problem of this study is '**Emfuleni local municipal residents continue to experience poor**

**water and sanitation service delivery due to irregularities in the management capacity of municipal workers. Unless this mismanagement is unravelled, the residents will not obtain equitable water and sanitation service delivery as enshrined in the constitution of South Africa’.**

#### **1.4 Research aims**

The research study aims to identify key challenges that impact water supply and sanitation service delivery in Emfuleni Local Municipality.

#### **1.5 Research questions**

The primary question this study seeks to answer is:

- What are the key challenges that impact water supply and sanitation service delivery in Emfuleni Local Municipality?

The secondary research questions are as follows:

- What is the structural composition of water and sanitation management in Emfuleni Local Municipality?
- What is the status quo of water and sanitation service delivery at the Emfuleni Local Municipality?
- What are the factors that affect the sustainable delivery of water and sanitation services in a municipality?
- How can water and sanitation service delivery be enhanced at the Emfuleni Local Municipality?

#### **1.6 Research objectives**

The primary objective of this study is:

- To identify the key challenges that impact water supply and sanitation service delivery in Emfuleni Local Municipality

The secondary research questions are as follows:

- To understand the structural composition of water and sanitation management in Emfuleni Local Municipality.

- To know the status quo of water and sanitation service delivery at Emfuleni Local Municipality.
- To peruse the factors that affect the sustainable delivery of water and sanitation service in a municipality.
- To peruse measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality.

### **1.7 Importance and benefits of the study**

The studies of DeCuir-Gunby and Schutz (2017:90) states that an author can create main contributions to a study by adding to knowledge to a discourse that provides evidence to substantiate a valuable conclusion. This study theoretically and empirically perused the possible initiatives to alleviate poor water and sanitation service delivery in hat firms in Emfuleni Local Municipality in Gauteng province. Other benefits of the study include:

#### **i) Literature to academia**

Two articles would be compiled from the prescripts of this study that will contribute to the existing literature in academia. The literature contribution will focus on the three objectives of this study that will enhance the performances of other municipalities that are facing similar problems in water and sanitation service delivery in South Africa.

#### **ii) Municipal policy formulation**

Findings derived from this study would be viewed as tangible evidence in the poor management of water and sanitation service delivery. Furthermore, the causes of poor performances and the recommendations made by the study to enhance water and sanitation service delivery will help in the formulation of new policies or amendments of existing policies of firms of Emfuleni Local Municipality in Gauteng.

#### **iii) Practical challenges**

The main research objective of this study is to know the status quo of water and sanitation service delivery at Emfuleni Local Municipality. Findings deduced from this study would be practically discussed concerning the existing knowledge to demonstrate how the present study will enhance the knowledge base. The recommendations of the study will serve as a proposition to policymakers to enhance service delivery while the recommendations for future research will serve as a proposal for future or additional research.

## **1.8 Delimitations and assumptions of the study**

The study focused on water and sanitation services in Emfuleni Local Municipality. The unit analysis selected was in Vanderbijlpark, where the Emfuleni Local Municipality (water and sanitation department) offices are located. The participants of the study included the municipal workers at the municipality. The study also utilised information from integrated development plans (IDPs), national municipal legislation, municipal annual reports, circulars and statistics obtained from water and sanitation departments in the municipality. The study is strictly confined to matters related to water and sanitation services in Emfuleni Local Municipality in the Gauteng Province. The assumptions of the study include that the outcomes of the study may differ from other similar local municipalities. The participants who contributed to the study are assumed to have had an understanding of identifying the factors that influence water and sanitation service delivery. The participants' responses are assumed to be truthful and accurate to resolve the problems identified in the problem statement of the study. The assumption is that the factors and outcomes of the study might differ from other similar municipalities.

## **1.9 Research methodology**

This study adopted a qualitative methodology. Qualitative research refers to the compilation of non-numerical inquiry using approaches such as participant observation, phenomenology, exploratory, or case study to explain findings in a narrative or descriptive accounts (Maree, 2015:263; Bryman & Bell, 2015:21). An exploratory research design was selected for this study, which enhanced an in-depth investigation. A face-to-face interview was adopted to collect data from the purposefully selected participants. A total of thirty (30) participants were selected for the study, of whom twenty-nine (29) participants were finally interviewed, resulting in a 96.7% response rate. After the collection of data, the responses from the participants were analysed using Atlas.ti software (version 8.2). The results were presented and corroborated with the literature review findings to give a comprehensive view of the study and to find solutions to the problems stated in the problem statement. The study concluded by presenting the overview of the study, a summary of findings, and the recommendations to improve water and sanitation delivery in Emfuleni Local Municipality.

## **1.10 Concept clarification**

This section clarifies the meaning of the following terms: communication, innovation, municipality, residents, service delivery, water and sanitation delivery and sustainable services.

**Communication:** Communication depicts the process of exchanging mutually-understood information between two or more people and communication dynamics refer to a variety of communication options used to communicate with two or more people (Valentzas & Broni, 2011; Wells, 2011).

**Innovation:** Innovation involves the process of creating entirely or improving new goods and services to enhance satisfaction (Montgomery & Perry, 2011:5; Atkinson, 2013:3; Stowe & Grider, 2014:2).

**Municipality:** The Constitution of Republic of South Africa (1996) defined a municipality as a management unit that has self-governing powers and authorities, and which is responsible for administering and providing services to the residents through its status of jurisdiction (Draganic, 2011:1; Hanyane & Naidoo, 2015:241).

**Residents:** These refer to the citizens of South Africa, also taxpayers and service consumers who reside in the municipal areas in South Africa (Hanyane & Naidoo, 2015:241; Constitution of Republic of South Africa, 1996).

**Service delivery:** This refers to the distribution and provision of services such as water, sanitation, electricity, infrastructure, housing and land to the citizens in their jurisdiction (Enwereji & Potgieter, 2018:228). Therefore, poor service delivery refers to lack of provision of the above-mentioned services to citizens who are entitled to those basic needs.

**Water and sanitation delivery** indicates that water and sanitation services form part of basic services that the municipality is obligated to provide to its community within their jurisdiction (Johannessen & Walsler, 2017:1). In addition, water and sanitation infrastructure services consist of water, sanitation, water and wastewater treatment works for purification of raw water abstracted from rivers, supply of potable water and collecting and treating wastewater collected from communities.

**Sustainable services:** This depicts the obligation of local municipalities to provide sustainable services including water and sanitation services to the residents who reside in the municipal areas (Constitution of South Africa of 1996).

## **1.11 Chapter layout**

The layout of this study assumed the following format:

- i) Chapter 1: Introduction and background of the study**

Chapter 1 outlined the context and orientation of this study. It included the introduction, background, problem statement, research questions and objectives, importance and benefits of the study, delimitations and assumptions, as well as the layout of the research report.

**ii) Chapter 2: Theoretical background and literature review**

Chapter 2 provided the theoretical background of the study such as the systems theory and the contingency theory. In the literature review, the legislative background of the study was reviewed and all the keywords related to the study themes.

**iii) Chapter 3: Research methodology**

Chapter 3 discussed the research methodology employed in the study. It commenced with the choice of research paradigm followed by the research approach, design, site selection, participant selection, data collection and analysis. Finally, the ethical concepts guiding the study were clearly stated.

**iv) Chapter 4: Presentation of research results**

Chapter 4 presented the results obtained from the data analysis of the study. All the themes and categories of the research results obtained from Atlas.ti software were presented. Afterward, these results were corroborated with the literature review findings in an endeavour to unravel the problem of the study.

**v) Chapter 5: Overview, conclusions and recommendations**

Chapter 5 discussed the results obtained from the empirical study. Furthermore, the study presented an overview of the study, a summary of findings, recommendations, and conclusions of the study.

## **CHAPTER 2**

### **THEORETICAL FRAMEWORK AND LITERATURE REVIEW**

#### **2.1 Introduction**

Water and sanitation service delivery could be enhanced if Emfuleni Local Municipality could enhance their managerial practices to ensure equitable service delivery. There have been negative reports from the residents of Emfuleni local municipality due to poor service delivery and the abilities of the municipality in providing basic services such as water supply and sanitation services to its communities (Brettenny and Sharp, 2016:11). The level of dissatisfaction with services has led to several protests and riots around the country that mostly

resulted in damage to municipal infrastructure such as municipal assets. This chapter presents the theoretical foundations and the literature review of the study. The systems theory and the decision-making theory underpin this study. These theories were selected to peruse the relationship between the municipal workers and their managerial capacity in providing equitable service provision to the residents. In the literature review, secondary sources such as the municipal legislation guiding equitable service delivery were investigated. The main themes contained in this study include the structural composition of water and sanitation management and the factors that affect the sustainable provision of water and sanitation service delivery in Emfuleni Local Municipality. Topics such as communication, innovation and strategic management are reviewed to explore how these could assist in facilitating equitable service delivery in the study area.

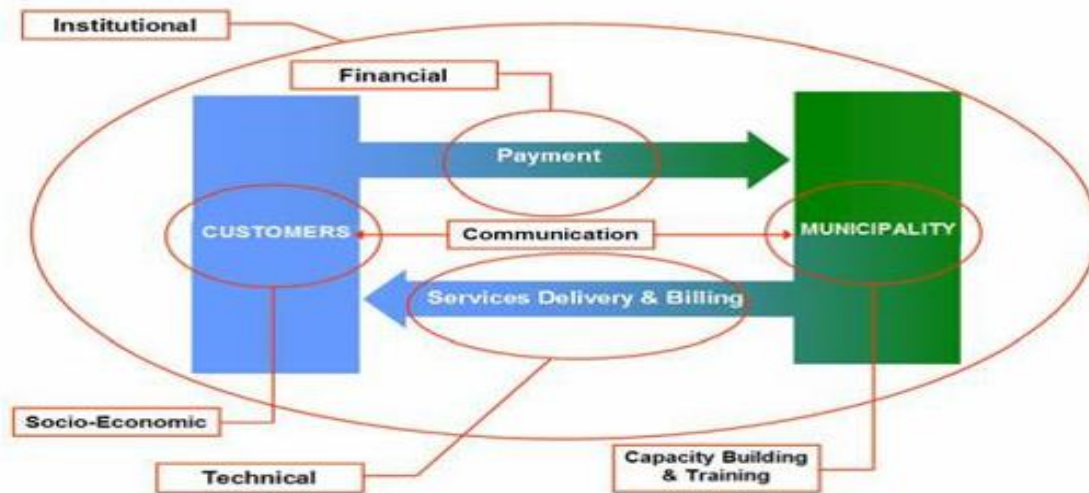
## **2.2 Theoretical framework**

The theoretical framework refers to the underlying concepts of a study in which important convictions are constructed about the nature of knowledge (Grant & Osanloo, 2014:5). A theoretical framework supports and directs a study through a structure and a description of how a study is organised philosophically and methodologically. The systems theory and the decision-making theory underpinned this study and these are explained in the subsequent sections.

### **2.2.1 Systems theory**

In the mid-20<sup>th</sup> century, Ludwig von Bertalanffy advanced the systems theory (*Allgemeine Systemlehre*) in his quest to change Aristotle's idea that knowledge comes from the whole to the parts, and that knowledge comes from parts to the whole (Mele, Pels and Polese (2010:135); Coetzee and Van Niekerk, (2012:3). A system is referred to as a compendium of units that function as a whole in a view to achieving agreed objectives (Mele *et al.*, 2010:129). This shows that to accomplish specified objectives, all the interacting units in a system should work effectively. Coetzee and Van Niekerk (2012:3) argue that the inability to work effectively of a unit in a system would affect the efficiency of the entire units of a system. To interact effectively with internal and external environments, it is important that all units translate input into output and extracting feedback from both environments. Systems theorists emphasise the need for departments to have a clear understanding of their goals, development strategies, understanding of their contexts, managing their interactions with internal and external environments, adjusting to current situations, and also being able to cope with challenging

times (Mele et al., 2010:136). The revenue enhancement model presented in Figure 2.1 practically depicts the systems model.



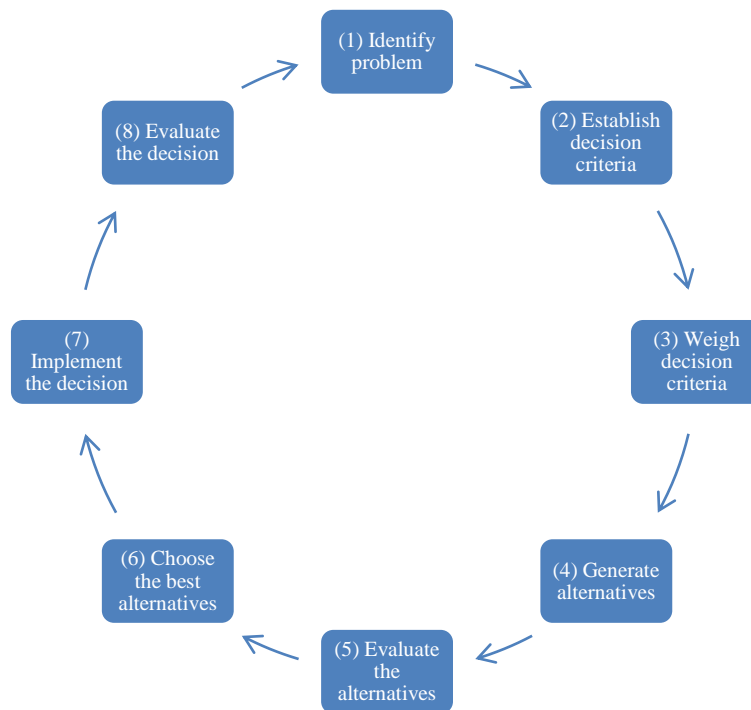
**Figure 2.1: Revenue enhancement model**

Source: USAID (2005)

The revenue enhancement model, as presented in Figure 2.1, depicts that the municipalities should adopt the systems theory to communicate with service consumers and understand their problems as this will assist in formulating measures to solve issues that may frustrate equitable service provision. The model reveals that payments should be made for services consumed while the system should consider capacity building and training, technical and socio-economic supports, and institutional backups.

### 2.2.2 Decision-making theory

Decision-making is a constant process of making significant decisions that are indispensable in the management of organisations (Bwisa *et al.*, 2014:1). Decision-making theory, according to Akrani (2011:2), depicts a situation in which multiple courses of action are chosen from two or more alternatives to solve a particular problem. This theory emphasises the need for managers to ensure that all the decisions should be made accurately basing on logical precepts to enrich the capacity of the management. In decision-making theory, managers (municipalities in this case) are expected to make logical selections from alternatives to solve a problem. In this case, a rational choice should be applied to enhance the effectiveness of work and to enhance organisational direction. Figure 2.2 presents the decision-making theory.



**Figure 2.2 Decision-making theory**

Source: Bwisa *et al.* (2014)

As shown in Figure 2.2, the decision-making theory consists of eight steps which include to identify a problem, establish decision criteria, weigh decision criteria, generate alternatives, evaluate alternatives, choose the best alternative, implement the decision, and evaluate the decision. Emfuleni Local Municipality should embrace the prescripts of this theory to make logical choices among accessible alternatives. Embracing the prescripts of this theory will enable the municipality to know the merits and demerits of available options and the best strategy to manage the poor service provision as identified in the municipality.

### **2.3 Literature review**

A literature review is an analysis of other scholars' works concerning the subject of study (Leedy & Omrod, 2014:51). The main themes addressed in this literature review include the legislation guiding the equitable provision of water and sanitation service delivery, structural composition of water and sanitation management, and factors that affect the sustainable provision of water and sanitation service delivery in Emfuleni Local Municipality. Other topics embedded in this study include communication, innovation and strategic management. These

topics are reviewed to explore how these could assist in facilitating equitable service delivery in the study area

## **2.4 Legislation guiding municipal service provision**

Several legislations are guiding the conducts of municipalities within the South African context, but this study reviewed only the legislation guiding equitable water and sanitation service delivery. These legislations are explained briefly in this study to should how it underpins service delivery in all municipalities.

### **2.4.1 The Constitution of Republic of South Africa (108 of 1996)**

The specific goals of the South African Constitution are to ensure that every citizen's quality of life is enhanced and to create a united democratic society. The Constitution of the Republic of South Africa (108 of 1996) emphasised the principles of ensuring that municipalities provide access to sustainable, adequate, safe and healthy environments to communities. The Constitution provided the framework for water legislations such as the National Water Services Act (36 of 1998) and Water Services Act (108 of 1997). Section 27 of the Constitution that recognise that every individual has a constitutional and basic right to access to sufficient and safe water. The state-owned entities governed by the constitution need to ensure that this basic right is adhered to by the Water Services Authority (WSA), Water Services Providers (WSA) and other water-related institutions. This basic right is part of promoting the principles of ensuring that there is an acceptable standard of living for human beings. Municipalities need to ensure that there is a safe, sustainable and unpolluted environment for all quality standards of living. The Constitution of Republic of South Africa section 27 further postulates that:

- i. There should be safe, acceptable, affordable and appropriate basic water supply and sanitation services for all South African Citizens; there should be education provided to South African citizens regarding the wise usage of water and healthy living practices; basic water and sanitation services should be equitable, affordable, effective, efficient, sustainable, and with a sensitivity for gender.
- ii. Water service authorities and water service providers must be accountable to all citizens within their jurisdiction. They should ensure that they have adequate capacity to make decisions regarding water services provision.
- iii. Water service authorities and water service providers should be efficient and accountable; viable for cost-effectiveness and implementation of applicable and gender equity and employment policies.

- iv. The prices of water and sanitation services from water service authorities and water service provider should be transparent to reflect equal social and economic elements to promote access to basic services.

#### 2.4.2 Water Services Act (108 of 1997)

The Water Services Act (108 of 1997) is a regulatory framework that provides the rights to all South African citizens to basic water services, which include water supply and sanitation services. The Act emphasises that there should be adequate water supply and a healthy environment that is not harmful to human well-being. The Water Services Act stipulates that water service authorities and water service providers such as the Department of Water and Sanitation, district municipalities, local municipalities, and water boards should ensure that they provide the basic access right to water supply and sanitation services. This is to ensure that there are sustainable, safe, appropriate and affordable water supply and sanitation services that are not harmful to the environment and well-being or human health. The Water Services Act 36 of 1998 and section 27 of the Constitution obligate all water institutions to provide preference in provision of basic water supply and basic sanitation to communities.

#### 2.4.3 National Water Act (36 of 1998)

The National Water Act (36 of 1998) has as its main purpose to ensure South African water resources are mainly used to provide in the basic needs of water supply for human consumption, to protect the mismanagement of water utilisation in terms of conservation, and to prevent pollution of the environment as a whole for the efficient long-term management of water supplies. The main objectives of the National Water Act (36 of 1998) are as follows:

- Meeting current and future generations' essential human needs;
- Addressing the basic human needs of present and future generations;
- Foster equal access to water;
- Redressing the implications of systemic racial discrimination and disparity between men and women;
- Promoting effective, healthy and beneficial public water use;
- To promote economic and social development;
- Having raised demand for water use;
- Maritime and companion protection

#### 2.4.4 National Environmental Management Act, 107 of 1998 (NEMA)

The National Environmental Management Act (107 of 1998) has as its purpose to provide the national government with an obligation to ensure the establishment of principles to co-ordinate environmental functions, decision-making and co-operative environmental governance. The NEMA ensures that there is the protection of the environment for the benefit of current and upcoming generations, through reasonable legislation and other measures such as:

- Preventing pollution and ecological degradation;
- Promoting conservation; and
- Securing ecologically sustainable development and use of natural resources while promoting justifiable economic and social development (Republic of South Africa, 1998).

#### 2.4.5 National Health Act (61 of 2003)

The National Health Act (61 of 2003) is obligated by the South African Constitution to impose laws on municipalities to provide health services to communities; these services include:

- Monitoring water quality
- Waste management
- Health monitoring of buildings
- Regulation of environmental emissions
- Chemical Protection (RSA, 2003)

Global, regional and local governments should ensure that sound health care policies are adhered to and implemented to foster a safe and healthy environment. According to the Human Rights Commission, it is indicated that section 27 of the Constitution addresses the right to basic water; it does not clearly indicate the right to the provision of sanitation. Therefore, the right to sanitation is derived from section 27(1) (b) whereby it states that health is a dignity to human beings and the environment (Republic of South Africa, 2018:6). Baquero *et al.* (2016:763) indicate that human rights to water and sanitation (HRWS) are the framework that measures different levels of service. It is essential that there is an adoption of these human rights and operation framework through specific metrics.

#### 2.4.6 South African Drinking Water Quality Framework

According to the National Norms and Standards for Domestic Water and Sanitation Services Version 3, it is vital that water service authorities and water service providers meet the water quality standards for human consumption, industrial purposes or the maintenance of ecosystems (RSA, 2017:15). The main goal is to ensure that water provision to communities complies with the South African National Standard (SANS) 241:2015.

The Emfuleni Local Municipality has established a monthly programme as per the requirement of Department of Water and Sanitation (DWS) of sampling and testing water depending on the size of the community to ensure that all water supplied to households is tested for compliance based on the South African National Standards (SANS, 241:2015) for potable drinking water. The water and sanitation cluster has a customer care department that provides consumers with education and awareness on water quality and its importance for human health. If the provision of water does not comply with SANS 241 standards, it will result in the consumption of unhealthy water by residents. The municipality needs to ensure that water treatment works and service providers such water boards take the necessary measures to ensure purification of water meets the requirements of water consumption by consumers.

#### 2.4.7 Integrated Development Plan (IDP)

In terms of section 23(1) of the Municipal Systems Act (32 of 2000), municipalities must have strategic development plans for planning, development, management, investment and implementation of action and decisions within municipalities' jurisdiction. The IDP plan succeeds in all other developmental plans that guide local government development. The plan ensures the following:

- Endeavours to accomplish the goals of local government outlined in section 152 of the Constitution.
- Provides effect to its developmental responsibilities, as demarcated in section 153 of the Constitution.
- Through other organs of state, contributes to the progressive realisation of the fundamental rights enclosed in sections 24, 25, 26, 27 and 29.

Dlamini and Reddy (2018:1) indicate that the integrated development plan (IDP) is a process plan that prepares a five-year strategic plan. The revision of the plan happens on an annual basis in consultation with stakeholders such as communities in the jurisdiction of the municipality. In the IDP plan, the municipality has to define its developmental vision and

mission and identify specific programmes and projects. The development plan clarifies the key development significances of the municipality, applicable strategies, the vision, mission and values of the municipality, applicable organisational structures, and the configuration of resources with relevant priorities.

According to Mathebula, Nkuna and Sebola (2016:70), provision of service delivery remains the main challenging element in the 21<sup>st</sup> century, mostly in developing countries around the world such as in South Africa. South Africa is included as part of the countries that experience distresses in service delivery backlogs, and it is essential that the municipality establishes a management-planning tool such as the municipal integrated development plan (IDP). The IDP will assist in enhancing service delivery in municipalities.

The subsequent section clarifies the structural composition of water and sanitation management.

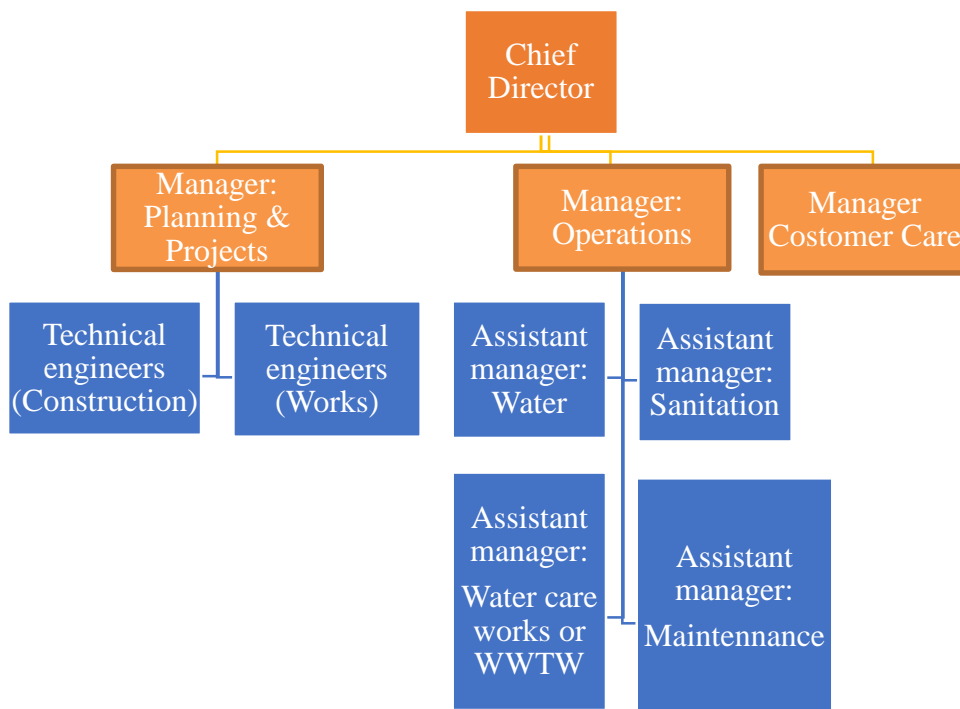
## **2.5 Emfuleni Local Municipality structure**

The organisational structure depicts how several outlined activities in the organisation are carried out to achieve the desired aim of the organisation. The Emfuleni Municipality water and sanitation delivery as presented in Figure 2.3 consists of three (3) sections and these are explained in the subsequent sections. It should be noted that the structure presented in sections 2.5, 2.5.1, 2.5.2 and 2.5.3 were obtained from Human Resource Department of Emfuleni Local Municipality (2019).

### **2.5.1 The chief director**

The directory section remains the responsibility of the chief director who supersedes and controls all the activities in the water management section. The success of administration, according to Manyaka (2014:127), is dependent on the ability of the administrator. The chief director can succeed in maintaining a reputable service delivery culture by ensuring that all established departments comply with the missions and visions of Emfuleni Local Municipality. Besides establishing a service delivery culture, the chief director controls all the functional departments and ensures that job ethics as stipulated by the Constitution are protected (HR, Emfuleni Municipality, 2019). The chief director in Emfuleni Municipality is referred to as the general manager and all the sectional managers are accountable to the chief director. All the

management functions in this department such as planning, organising, controlling, and directing fall within the duties of the chief director in Emfuleni Local Municipality.



**Figure 2.3 The structure of Emfuleni local municipality water and sanitation delivery**

Source: Emfuleni Local Municipality (2020)

### 2.5.2 Sectional managers

The sectional managers are directly under the chief director. In this section, three sectional managers ensure equitable delivery of water services and these include the manager (planning and projects), manager (operations) and manager (customer care). These managers are streamlined to facilitate functional activities to guarantee effective management of water resources and the delivery of effective services as enshrined in the Constitution of South Africa. The manager (planning and projects) is entrusted with obligations such as ensuring that all the procurements and deliveries of projects are effectively planned. They further embark on environmental analysis and strategy formulation. The environmental analysis is done to comprehend the general attributes of the environment and to understand the strengths, weaknesses, opportunities and threats the organisation is faced with and to proffer soluble solutions to counter the threats (Kessler, 2012:3). The manager (operations) oversees that the activities planned by the planning and project departments are executed according to the organisational plan. This department ensures that projects are well-executed and monitored. The operations department is responsible for developing an implementation plan to translate

strategy into action and this positions the manager in this category to bring management tasks together, which encompass the mission, vision, goals, ethics, culture, employee enthusiasm and communication (Parnell, 2014:52). The operations manager engages in benchmarking performance, measuring performance, analysing variance, and accepting corrective actions. The manager (customer care) ensures that there is effective communication in the organisation and beyond the boundaries of the organisation. The manager (customer care) ensures that there is adequate flow of information between the municipality and the residents who are considered as the water consumers. All complaints are gathered by this department, while actions are taken collectively (three managers) to address issues obtained from the external environment (residents in this case).

### 2.5.3 Technical assistants

Technical assistants are workers who assist the sectional managers to achieve the goals of the organisation. They perform functional duties to ensure a smooth operation of water delivery in Emfuleni Local Municipality. There are six (6) technical assistants in the structure of Emfuleni local municipal water service delivery and these consist of the technical engineers (construction), technical engineers (works), assistant manager (water), assistant manager (sanitation), assistant manager (water care) and assistant manager (maintenance). In their functions, the technical engineer (construction) deals with the construction works of the municipality. They ensure that areas to be covered are investigated. Furthermore, all the materials needed to cover those areas are procured and constructed by them. The technical engineers (works) ensure that all the constructions (pipes, metres, others) are in good shape. It is the duty of the technical engineer (works) to attend to all emergencies such as leakages and maintenances to ensure adequate delivery. These two engineers (construction & works) report to the manager (planning & projects) to achieve equitable service delivery. Other technical assistants include an assistant manager (water) who ensures availability of water, assistant engineer (sanitation) who ensures adequate sanitation, assistant manager (water works) and assistant manager (maintenance) who works with the engineer (works) to ensure maintenance or leakages.

## **2.6 Factors affecting the sustainable provision of water and sanitation service delivery**

Brettenny and Sharp (2016:11) indicate that South Africa has been experiencing several public protests recently, which are related to inadequate service delivery such as basic services (water and sanitation) to communities. In response to challenges that led to these unrests, the South African government has introduced a Blue Drop System (water supply) and Green Drop System (sanitation services) that can assist to improve and monitor the quality and operational efficiency of potable water and sanitation services in municipalities (Brettenny and Sharp, 2016:11). The introduction of Blue Drop and Green Drop Systems has been regarded as a success, but still, the effectiveness on which these services are provided is to be evaluated. The introduction of the Green Drop and Blue Drop was a good initiative to improve water and sanitation services service delivery in municipalities, but the effective and efficient implementation of the programmes is still a challenge in most municipalities in the country, especially in Emfuleni Local Municipality.

The factors that affect the sustainable provision of water and sanitation service delivery are expounded upon in the subsequent sections.

#### 2.6.1 Population growth and climate change

Graham and Hopewell (2014:208) opine that the urban population in Sub-Saharan Africa is likely to grow from 414 million to 1.2 billion by 2050. This growth had predicated to increase municipalities' challenges to provide services of water supply and sanitation services to their communities. Beyers (2016:167) indicates that the main challenge that is facing smaller South African municipalities is the impact of climate change. Hellberg and Chu (2016:549) affirm that climate change occurs due to heat absorption from the sun, without allowing it to escape into space. It is commonly referred to as the greenhouse effect as it acts like a greenhouse window (Hellberg and Chu, 2016:548). Zwane (2019:560) notes that South Africa is known to be a water-stressed nation with an average annual rainfall of 500 mm (within 60 per cent of the global average). Provinces in the South-East receive more rainfall than provinces in the Midwest, North and North West because they remain arid or semi-arid, while receiving less than 500 mm of rainfall a year (Department of Environmental Affairs, 2015). The desire to improve citizens' access to water (both rural and urban) continues to put more stress on the hydrological system as a result of growing human need. Given the impacts of climate change, South Africa is expected to use its large sources of surface water by 2025 (Intergovernmental Panel on Climate Change (IPCC), 2014). This section stipulates that population growth and climate change are one of the constraints to the delivery of water and sanitation delivery in Emfuleni Local Municipality.

### 2.6.2 Infrastructural condition

One of the major issues facing the nation has been declining infrastructure due to ageing and insufficient maintenance (Toxopeus, 2019:1). South Africa's approach to the maintenance of water resources appears to be disproportionately reactive rather than constructive, therefore increasing the repair costs unnecessarily and reducing the usable life span of the infrastructure. Strategically, until effective water conservation and water demand management strategies have been implemented in the region, South Africa has undertaken not to approve or build new water supply projects (National Water Research Strategy, 2013:53). Sound asset management practices and the maintenance of infrastructure are considered critical because of recessionary pressures and increased pressure on national taxation. More than one-third of water losses are caused by non-revenue water, reflecting water lost due to leaks and business losses, and acting as a reliable measure of the state of water supplies. The lack of engineering and technical assistant capability often leads to the mismanagement of the water system and the failure to maintain it effectively, particularly at the municipal level where infrastructure is most frequently managed and maintained (South African Institute for Civil Engineering (SAICE), 2017:5). At various stages of development, new technology is underway to help relieve the burden on existing water structures. However, such programmes typically face substantial delays.

### 2.6.3 Wastewater treatment

Wastewater is considered a plaguing issue within the South African context and this demands a variety of revenue sources. Water treatment options include nutrient use in fertilisers, generation biogas and water conservation possibilities (National Business Initiative, 2019:7). The problem of coping with pollution is, therefore, a funding problem. The primary challenges, however, are also based around infrastructure, management and power institution-based issues. There are major ways to fund wastewater facilities by obtaining procurement agreements for the reuse of water for industrial and agricultural applications. There should also be healthy cost savings and revenue flows found in improved energy efficiency and production of biogas under the wastewater programme. The possibilities of attracting finance by conventional methods (such as regional budgets, and commercial loans) and more innovative approaches (for example, municipal bonds, Public Private Partnerships (PPPs) seem to be difficult recently. The efficiency of wastewater treatment impacts in a variety of ways on all people in society as well as the economy. The discharge into the atmosphere of poorly treated or untreated wastewater decreases the capacity of the system to assist the societal demands (Mitchell *et al.*,

2014:9). The effective delivery of clean water to the urban and local areas, agriculture, and industrial use is very important to increase the health benefits of the citizenry.

#### 2.6.4 Limited supply of water resources

The most apparent problem surrounding water supplies is the limited supply of water resources and this has limited the capacity of Emfuleni municipality to deliver water resources to the residents (Emfuleni Municipality, 2019). This issue can be handled by the construction and use of suitable storage facilities, even when lead times are often longer than expected. However, it demands a degree of specialised and timely expertise management intervention guided by good local hydrology knowledge and water utilisation patterns to handle. The variability of rainfall and river flows due to climate change has led to a low supply of water and this has continuously led to poor service delivery in local municipalities. Efficient preparation, strong intergovernmental ties, and successful execution could be applied to accomplish effective leadership and a suitable service delivery model. The water supply within Emfuleni municipality includes streams, wells, dams and boreholes, which are the primary sources of water from the rivers. According to the data available on the Department of Water Sanitation (2015), dam level status within the municipality requires sufficient rainfall to provide consistent and sufficient water to facilitate the flow of available water sources. (Department of Water and Sanitation, 2015).

#### 2.6.5 Financial management

Financial management, according to Pauw, Woods, Van der Linde, Fourie, and Visser (2013:119), refers to an organisation's management technique for achieving its financial objectives. Realising these financial targets includes evaluating financial opportunities, determining investment opportunities, and tracking the investment's financial consequences. Besides, Pauw *et al.* (2013:126) point out three fundamentals of financial management as to why, what and how financial capital can be effectively maximised and controlled in an organisation. For upgrading and replacement of old water facilities, more capital is needed by the Water and Sanitation Department, but it is very unfortunate to notice that the financial resources are not adequate while there is no effective management in place. The municipality is heavily owed by water consumers due to the inability to mobilise debts by the municipality financial officers and this makes it very difficult to devise a strategy to handle water resources properly (Emfuleni Municipality, 2019). Financial management covers matters such as water resources budgeting that also allow for relevant tariffs. With the Emfuleni municipality, it has been noted that the tariffs paid by water consumers do not seem to be cost-reflecting in the

threshold increase as determined by the National Treasury, also when Eskom raises the tariffs, it is usually more than the expected financial budget and this causes a financial burden to the municipality, which invariably cripples service delivery (Emfuleni Municipality, 2019).

#### 2.6.6 Lack of proper implementation of service delivery legislation

Lack of proper implementation of legislation is one of the issues limiting the delivery of water and sanitation in Emfuleni municipality. Concerning the households receiving water supply and sewage within the municipality, some of the settlements in the rural areas do not comply with the bylaws as there are no strict restrictions on water use. To attain sustainability of water use in the municipality, strict steps must be taken to maintain and regulate water demand, whether it is surface or underground (Maake and Holtzhausen, 2015:253). The fact that water is not calculated in rural areas is a direct indicator of the lack of plans for water conservation and demand management, also another worrisome issue is the high degree of illicit connections particularly on the bulk pipeline, due to poor implementation of water resource regulations (Department of Water Affairs, 2019). When illicit connections are done on the water pipeline, it reduces the amount of water that enters the storage tanks and reservoirs and reduces the supply of water. This actively erupts service provision protests when communities do not obtain water adequate for their use. Community members constantly invade the municipalities to protest the lack of water but do not want to understand the reasons for poor service delivery (Emfuleni Municipality, 2019). Municipalities could avoid these issues by implementing the content of law to the residents that default through payment default, non-payment and illegal connection of water supply (Enwereji and Kadama, 2018:284).

#### 2.6.7 Leadership issues

Municipal leaders should always provide strategic leadership at all levels of governance. Strategic leadership is a method in which strategists use all their expertise and abilities to direct organisations to achieve specified goals (Hill, Schilling and Jones 2017:120). In Louw and Venter's (2012:34) view, strategic leadership focuses on performing middle management positions in delivering a tactical and organizational level of management. Louw and Venter (2012:35) note that, within the organizational structure, a strategic leader recognizes the essence of the internal and external world and makes desired changes. One of the main factors in effective institutions is the ability of the leaders to perform exceedingly and this is relevant to pioneer the affairs of local authorities (Maake and Holtzhausen, 2015:253). The implementation of perfect decisions will define how effective an organisation will be in meeting all the agreed goals and it has been noted that decision-making abilities within the

municipal water services delivery have been affected in particular. The credit management and debt recovery policies in the municipality are not effectively pursued, which has posed a great financial burden to the municipality (Emfuleni Municipality, 2019). This is attributed to the ability of the leaders to apply adequate debt management and strict financial recovery strategies. In most municipalities, it is reported that credit management and debt recovery are no longer sent to municipal councils as it enables council members to assess the efficacy and execution of the strategy to make informed decisions (Auditor General's Report for Emfuleni Municipality, 2019).

#### 2.6.8 Lack of skills

Lack of skills such as engineering professionals, technical professionals, municipal development skills, financial skills and strategic management skills in South African municipalities is at the root of poor water service delivery (Auditor General, 2019). It is often said loosely that an organisation lacks credible abilities to perform when there is no tangible evidence of success. This may simply imply a lack of skill/ability to perform a job specification or lack of staff to fill the available positions ((Maake and Holtzhausen, 2015:254). In Emfuleni municipality, a major constraint has been the lack of skills in running huge projects such as water service projects (HR, Emfuleni Municipality, 2015). It is from this perspective that the municipality considered it necessary to deploy experts to develop capacity in different fields to meet the required standards and procedures. It is documented that a total of 28% of the country's residents have an insufficient water supply (Department of Water and Sanitation, 2015). The experienced water leaks in households are attributed to the aging infrastructure and lack of professional skill personnel by the municipalities (Emfuleni Municipality, 2019). It is deemed very necessary to upgrade water meters by experienced municipal personnel every nine years because if that is not done, customers would end up underpaid for water. High water consumption in South Africa at 227 cubic meters per day had to be addressed as a matter of urgency as there is an estimated population of 54 million people in the country who depend on this dwindling resource (Auditor General, 2019).

#### 2.6.9 Lack of training

The Government of South Africa has committed itself to an ambitious goal of reducing the backlog of water and sanitation infrastructure due to the lack of expertise of workers at the local government level as this poses a challenge to achieving the water and sanitation delivery targets (National Business Initiative, 2019:5). For most municipalities, the poor delivery rate is primarily due to insufficient technological skills. The problem is especially severe within

rural communities that have the lowest resource base and have the highest backlog figures for sanitation at the same time. The skills shortage is not limited to the water services sector; the water resource management sector is facing a similar problem (National Business Initiative, 2019:6). There is growing concern among stakeholders in the sector that current skills development approaches do not produce the number of skilled people required to boost municipal efficiency. This situation calls for a study of existing skill development and training programmes offered by public and private agencies to identify factors that impede the development of accelerated skills, given the availability of substantial budgets from the skills development fund (SAICE, 2017:3). Apprenticeships provide an inherently sound method to ensure competency growth based on performance. Part of the strength of the method is that the aspect of practical skills learning is workplace-based, resulting in potentially solid practical competencies that would help to enhance water service delivery. An important underlying assumption, however, is that there will be enough qualified personnel in place to ensure that preparation and evaluation may take place in the workplace. To achieve equitable water and sanitation delivery, it will require the availability of sufficient professionals and evaluators to handle the backlog (Maake and Holtzhausen, 2015:255).

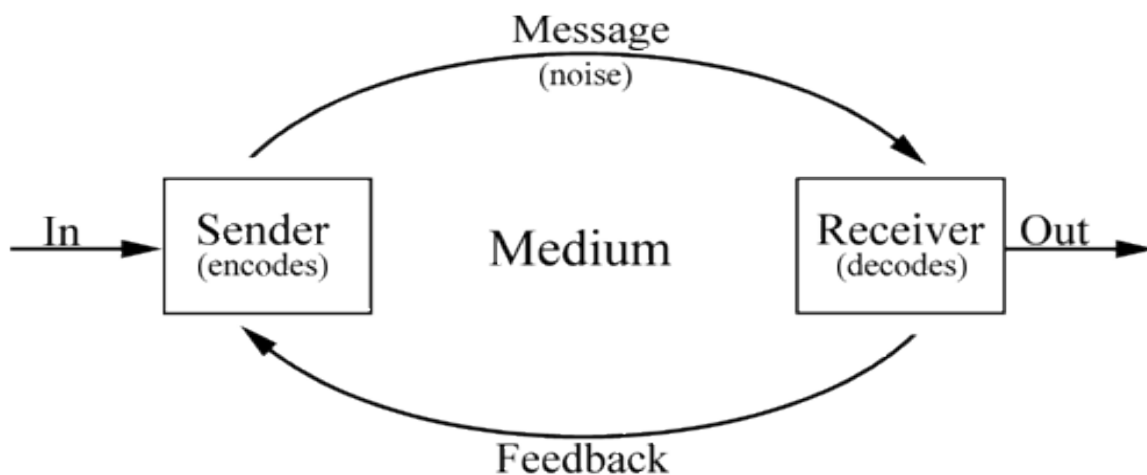
**The subsequent section expatiates on the need to adopt effective communication to achieve equitable service delivery provision in Emfuleni municipality.**

## **2.7. Communication and service delivery**

This topic is included in this study to understand the meaning of communication and how it is needed in Emfuleni Local Municipality in an endeavour to promote equitable service delivery to the residents. Miriam Webster Dictionary (2017) affirms that communication portrays the interchange of information between people via spoken words, symbols, signs, or behaviour. Communication known as '*Communis*' in Latin is ascribed to the comprehension of meanings from a sender to the recipient (Lunenburg, 2010:4). In correspondence to this, USAID (2005:26) and Sauer (2014:133) state that communication involves all the processes involved in the passing of the correct information at the right time to a target audience using the right channels. Moreover, Wallace and Roberson's (2009:29), Valentzas and Broni's (2011:117) and Wells' (2011:1) assertions indicate that communication includes procedures involved in disseminating mutual information from one person to another using a suitable medium.

In a typical communication model, two main people, known as the information sender and the information receiver, serve as the social actors (Lunenburg, 2010:6). In this report, the aim of

adopting a model is to provide a visual representation to give municipal role-players and residents a broader clarification on the contact process (Gavi, 2013:2). The model of communication depicts a visual symbol that represents the human communication process. The selected communication model for this study explains the processes involved in achieving efficient communication (see Figure 2.4). According to Figure 2.4, the sender encodes a message to a receiver through a medium and when it is received, a message known as the feedback is sent to the sender through a medium. The communication process is said to attain a complete process until the sender receives the receiver's input. Organisations (municipalities in this case) must follow suitable platforms for sending messages to their customers (residents), thereby ensuring that input is received to decide further measures to be taken. In this regard, municipalities should ensure that they understand their environment, communicate adequately with the residents, and find measures to resolve their problems as immediately as possible to avoid service delivery protests.



**Figure 2.4: Communication process**

Source: USAID (2005)

### 2.7.1 Merits of communication

In the view of Leonard (2018:1), communication is a process where people share their views through sending and receiving different messages thereby facilitating mutual relationships. Consistently, Jamela (2016:2) compliments this assertion by opining that communication keeps people together and provides plans for actions. The advantages of communication were included in this topic to enlighten the municipalities and organisations on the merits of communication to incorporate it in their service provision process to achieve the objectives of

the municipalities as specified in the Constitution of South Africa. The following are the advantages of communication as provided by Leonard (2018:1):

(1) Improving comprehension: Awareness and comprehension are created in the process of communication, which invariably eliminates frustrations and fosters trust, confidence, as well as assurance.

(2) Clarification of emotional signals: A communication process ensures that messages are sent and received, thereby helping to bring to clarity information that is being misunderstood. It can, therefore, help in approaching an angry individual and supporting an aggrieved client.

(3) Relationship building mechanism: Municipalities can establish cordial relationships and trust with the residents by providing them with needed information, thereby establishing good relationships with them.

(4) Bridging of differences: The communication process assists in bridging differences between people of different backgrounds and this fosters the resolution of problems across boundaries.

(5) Team building: Effective communication between people eliminates unwanted competition, thereby helping to build group cohesion to achieve organisational efficiency.

(6) Moral enhancement: Constructive communication promotes morale and a safe work atmosphere as management interacts with workers appropriately. Employees perform their duties more effectively when, through the communication process, their duties are well clarified.

## 2.7.2 Methods of communication

According to Valentzas and Broni (2011:117), there are two main methods used in the communication process and these are electronic and print media. However, these forms of communication are collectively used to convey information from one person to another. Local municipalities could also adopt these methods of communication to send or receive information to/from the residents to accomplish their service provision bid. The different forms of communication such as electronic and print media are explained below.

### 2.7.2.1 Electronic media

According to Hutton (2011:1), “electronic media refers to media requiring integrated circuit technology to send and receive messages.” Hassan (2012:1) also noted that electronic media facilitates the sending and receiving of messages between senders and receivers. In electronic

media, visual and audio messages are generated and used to inform or educate people on a subject matter. Electronic media types include television, radio sets, YouTube, social media, electronic mail (e-mail), desktops and laptops, electronic billboards, and the internet. These electronic media could be adopted due to the following reasons, according to Hutton (2011:1) and Hassan (2012:1):

- Electronic media creates visual messages thereby providing more clarifications to the receiver.
- Electronic media is chosen by most organisations due to its ability to cover a very wide range of audience instantly
- Electronic media can be used to capture the target audience at a very cheap cost.
- This type of media is often used to remind a target market or to educate them on a specific issue.
- The internet facilitates instantaneous response, interaction, tracking, as well as promoting efficiency.

#### 2.7.2.2 Print media

This includes the process by which information is disseminated by printed documents such as posters, pamphlets, magazines, inserts and even newspapers. Bird, Ling and Haynes (2012:28) affirm that print media can be used to convey issues related to local, provincial and national matters. It could also be convenient to adopt this type of media as it could use pictures to expound on the messages. Print media that could be used by municipalities to promote or educate residents on all matters related to service provision include newspapers, magazines, flyers, pamphlets, and inserts in newspapers. Following are the advantages according to Bird, Ling et al. (2012:28) of adopting a print media to convey information across people:

- Print media is reliable as the origin of such information is adequately identified.
- It could convey information that could be stored for a relatively long period.
- Information on print media such as flyers is precise and comprehensible.
- Information is cheap to print.

This section explains the meaning of communication, merits and methods involved in the communication process. It could be deduced that effective communication is very vital in organisations and municipalities to ensure that messages are conveyed to residents on service

delivery issues. This will help to identify issues surrounding sanitation and water delivery and to find measures to assist residents promptly.

## **2.8 Innovation and service delivery**

The aim of including this section is to opine measures to the municipalities to adopt in their endeavour to enhance service delivery as constitutionally stipulated. Atkinson (2013:3) affirms that innovation is a process of change through where new things such as services or goods are created. This was confirmed by Montgomery and Perry (2011:1) who confirm that innovation can be either a breakthrough or an innovation that can be applied for sustenance. Breakthrough innovation, according to Montgomery and Perry (2011:4), refers to when people create entirely new methods of services or the creation of new goods; also, sustaining innovation entails improving goods and services as a replacement or a change. In the view of Stowe and Grider (2014:2), Horth and Bunchner (2014:4) and Joyce (2017:120), managers encounter numerous challenges concerning the steps required to achieve progress in the work environment. Strategic administrators (municipal administrators in this case) are required to predict the future by making counter plans to gain competitive advantage through the innovation cycle. Managers are supposed to think in inventive ways and recommend various steps to address problems that may pose a challenge to the progress of the organisation (Horth and Bunchner, 2014:5). In the delivery of water and sanitation delivery, the following are recommended:

1. The provision of high sensory metres: High sensory metres should be adopted by municipalities to identify residents who are having service delivery challenges and to dictate spillages or illegal connections.
2. Debt management: Adequate debt management should be implemented by the municipality and debt enforcement measures should be deployed to ensure payment compliance.
3. Several means of payment should be devised such as ATM, mobile payment, electronic fund transfers, debit orders and stop orders to replace the traditional ways of queuing at the municipalities.
4. Contemporary communication measures such as social media, emails, the internet, YouTube, and SMS should be adopted to convey messages to the residents promptly.

The following are the merits of innovation.

### 2.8.1 Merits of innovation

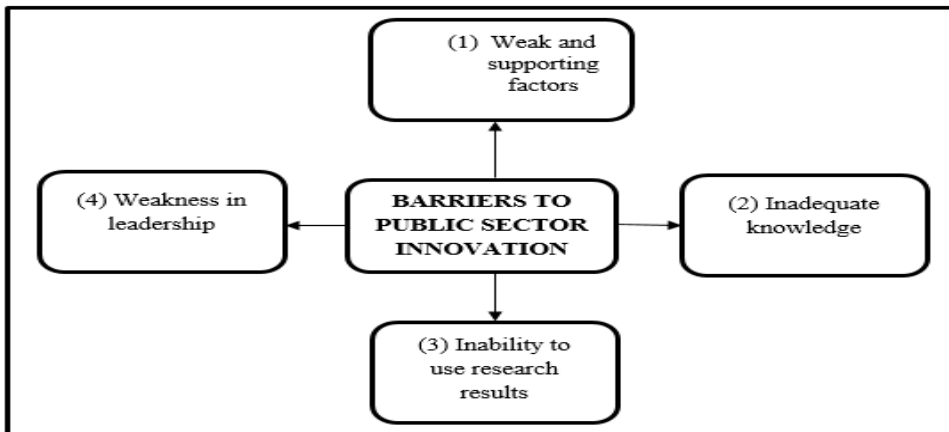
Local municipalities in South Africa need innovations and this was confirmed by Birkinshaw, Hamel and Mol (2008:825), who believe that innovation has made a tremendous contribution to the perfection of working process methodology and the overall productivity of organisations. In Montgomery and Perry's (2011:4) view, innovation helps to invent new products as well as find new ways to deploy those products. Montgomery and Perry (2011:5) further argue that creativity promotes good leadership and creates fresh talent to meet public demand. To achieve success in the organisation, Horth and Bunchner (2014:1) posit that the following merits can be achieved through the facilitation of public sector innovation:

- Challenges from all aspects of productivity, payment options, service delivery and human resource issues are resolved through breakthrough and sustaining innovations.
- Innovations enhances organisation to generate revenue, raise the market share of the company, and attain a competitive advantage.
- This helps to boost product quality and therefore to reduce production costs.
- It helps to increase brand awareness and reputation by enhancing methodologies.
- The ability to participate in new alliances and improve new relationships.
- It upsurges employee efficiency and increases organisational productivity.
- Aspects of innovation help to improve customer relations and satisfaction.

Horth and Bunchner (2014:5) stated that innovation in organisations is continually required to make the best for the public interest. In this respect, to achieve progress, municipalities should adopt the prescriptions of innovation to achieve the objectives of the municipality as required by the Constitution. Municipalities should ensure that the old manual methods of handling service delivery should be replaced with modern technologies. High sensory metres, prepaid water metres, new payment methods, new communication methods, new methods of tendering reports by the residents and new methods of appeal should be invented to achieve equitable service delivery in Emfuleni Local Municipality.

### 2.8.2 Barriers to public sector innovation

Many factors are known as limitations to attain innovation in the public sector, and Bason, Hollanders, Gomez, Kattel, Korell, Leitner, Masson, Mazzucato, Mungui-Pippidi, Prohl and Oravec (2013:15) established these factors as weak and supporting factors, inadequate knowledge, inability to use research results, and weakness in leadership. Figure 2.5 presents a pictorial representation of public sector barriers.



**Figure 2.5: Public sector innovation**

Source: Bason *et al.* (2013)

Figure 2.5 affirms that barriers to public sector innovation include weak and supporting factors, inadequate knowledge, inability to use research results, and weakness in leadership.

## **2.9 Strategic management and service delivery**

Strategic management is included in this study to expound its meaning to the municipal executives to know how they can handle the affairs of the municipality to achieve equitable service delivery. Organisations such as local municipalities require adequate monitoring of their internal and external business environments to achieve success in service delivery. To initiate change in organisations, the prescripts of strategic management need to be facilitated to attain anticipated goals. Strategic management is a process by which future goals are determined by present decisions to realise a specific goal (Anna, 2015:19). It is also the art and science used to formulate, implement, analyse and evaluate cross-functional decisions that assist organisations to attain their goals (Verweir, 2014:32). The external environments are prone to changes such as the change in technology, close competitors, and tastes and fashions; organisations (municipalities in this case) should endeavour to combine their human and financial resources to ensure success.

Strategic management is viewed as an organisation’s tactical effort to gain a competitive advantage in their business surroundings (Rothaermel, 2013:21; Joyce, 2017:105). It is seen as a philosophy of management on how leaders could provide direction to attain predetermined

goals. The main success factor for an organisation, as Rothaermel (2013:26) affirms, is not copying a business rival; the only thing that matters in achieving market success is the willingness of management to mix and diversify activities to ensure creativity and innovation. Joyce (2017:67) also suggests that the competitive advantage is obtained by leaders in doing things in a special way. In this regard, Thompson, Scott and Martin. (2014:90) uphold that leaders follow the prescripts of strategic management to transform their organisations to meet up with business challenges. The strategic management process depicts the necessary steps taken by organisations to evaluate an organisation's strengths and weaknesses to survive among competitors and to meet all stakeholders' expectations. This was confirmed by Joyce (2017:65) who stated that strategic leaders classify organisational goals and therefore plan how to achieve the objectives by putting concepts into action and applying possible innovative measures. Strategic management suggests that managers should endeavour to think creatively and implement transformation steps to help the organisation grow (Louw and Venter, 2012:67). To survive in a competitive environment, Louw and Venter (2012:68) and Thompson *et al.* (2014:78) note that management should be driven by the following questions to direct organisational actions: *Where are we now? Where is our direction? How do we get there timeously?* To provide solutions to these questions, Louw and Venter (2012:69) state that managers are required to competitively position organisations, analyse the environment, formulate measures to meet organisational needs, implement and monitor these measures, and evaluate these measures. The following are the advantages of strategic management:

### 2.9.1 Advantages of strategic management

The implementation of strategic management is highly needed for organisations to succeed in attaining the various objectives. Joyce (2017:34) and Thompson *et al.* (2014:87) affirm the following are the objectives of strategic management:

- Strategic management helps to shows the organisations the best direction to follow.
- Assists organisations to become more proactive instead of reactive.
- Directs businesses to plan and address the problems that can emerge in the future.
- Strategic management enhances decision-making in organisations.
- It helps to achieve competitive advantage and gives the organisation long-term survival guarantees.
- Strategic management helps the organisation to establish its long-term goals and maps out measures to attain the identified goals.

- Finally, strategic management is the bedrock for attaining organisational goals and success.

This chapter perused the context of strategic management, it could be observed that strategic management helps the organisations to establish their long-term goals and outlining measures to attain such goals. Emfuleni municipality workers are required to adopt the prescripts of strategic management to identify the problems facing water and sanitation delivery and map out measures to enhance service delivery as stated by the Constitution of South Africa.

## **2.10 Chapter summary**

Chapter 2 focused on the literature review of the study and this was done to gather other scholars' views on the themes of this study. The theories that underpinned this study include the systems theory and decision-making theory. These management theories were selected to guide the municipalities in their communication and decision-making processes to attain the objectives of the municipality. The legislations guiding water and sanitation service delivery were further reviewed to understand the importance of equitable service delivery to the citizenry. Furthermore, the Emfuleni Local Municipality service delivery structure was perused to know how the decisions to facilitate service delivery flows in the municipality. Other topics incorporated in the study include communication, innovation and strategic management. These topics were embedded in the study to suggest measures to enhance water and sanitation service delivery in Emfuleni Local Municipality.

The next chapter presents the research methodology adopted in this study.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 Introduction

It is deemed improper to conclude scholarly research without stating briefly the appropriate research methodologies adopted to find solutions to the study problems. For clarity of this study, this chapter presented the research methodology adopted in this study. Topics such as research methodology and paradigm, research approach and design, site and participant selection, data collecting instruments, the rigour of the study, and all ethical concepts applied in this study were clearly stated.

#### 3.2 Research paradigm

The selection of a research paradigm to be used in a research study can only be done concerning the nature of the phenomenon under study (Clough and Nutbrown, 2012:20). There are customs, however, which can help decide ways of continuing and also dictate our understanding of how a phenomenon will be investigated. The most important components of a research methodology are the selection of the philosophical assumptions and the methods selected to guide the study (Creswell, 2014:5). Paradigm sometimes appears to be hidden in a research investigation but Creswell (2014:6) opines that it ultimately influences the choices made by the researcher in selecting options to find solutions to the problems of a study. In this regard, Creswell (2014:6) further attests that paradigm relates to the following sentences:

- The philosophical concept or worldview suggested being included in a study.
- A description of the ideas of the methods selected.
- The shaping of a study using worldviews.

Basing on these explanations above, Creswell (2014:6) concludes that paradigms are general conceptual perspectives about the universe and the essence of science that the researcher adopts in a study. This perspective on paradigms can emerge from students' mentors' choices, previous study experiences, or even discipline orientation. The research paradigm adopted in this study is the social constructivist research paradigm.

The social constructivist movement claims that people seek to understand the world by creating their everyday experiences' subjective meanings. This assertion could be ambiguous because the participants vary in thought and formulate many subjective ideas. The aim of a study

developed under this framework is to concentrate on the participants' opinions on the phenomenon investigated. This paradigm choice facilitates acquiring an in-depth knowledge of the phenomenon under study through contact with participants (Creswell, 2014:7). Furthermore, it allowed the researcher to concentrate on the participants' perspective on the issue under review using open-ended questions (Creswell, 2014).

### **3.3 Research approach**

The philosophical perspectives, methodological understanding and designs adopted by a researcher best describe a research approach and this can be quantitative, qualitative and mixed-methods (Bryman and Bell, 2015:391; Creswell, 2014:17). For this study, a qualitative research approach was adopted to find solutions to the study problem. Maree (2015:263) and Bryman and Bell (2015:21) accept that qualitative analysis is the collection of non-numerical data to describe outcomes in narrative or descriptive accounts using methods such as participant evaluation, phenomenology, or case study. Centered on the following reasons, this study adopts the qualitative method:

- Gained a detailed understanding of the study under investigation through physical contacts.
- Helped researcher to communicate with the municipal staff through interviews, thereby obtaining detailed knowledge about the problems facing water and sanitation delivery.
- Obtained obtain a historical account of the occurrence of poor service provision in Emfuleni Local Municipality and the perspective of water and sanitation delivery.

### **3.4 Research design**

In the view of Maree (2010:70), a research design is a strategy that is typically based on a philosophical assumption that helps in the selection of participants, data collection procedures, and methods involved in data analysis. Depending on this definition, the method of inquiry also known as the research design is defined by the researchers' conceptual theory and patterns of data collection (Gray, 2014:129). Nonetheless, it should be noted that a researcher can select the choice of design based on the most appropriate for generating the kind of data needed to address the research questions (Creswell, 2014:17). This research adopted an exploratory research design. Baxter and Jack (2008:548) attest that an exploratory study refers to an investigation into a problem that provides a new perspective to the research problem. Labaree (2013:6) also pinpoints that an exploratory study is conducted where there is little knowledge about a problem and the researcher may use various methods such as interviews, document

analysis, group discussions, and surveys to obtain information from the respondents. An exploratory study involves numerous aspects that are studied and examined to comprehend the phenomenon under study. This study adopted an exploratory design due to the following reasons:

- About a lack of knowledge on the reasons for poor water and sanitation delivery in Emfuleni municipality, exploratory design was adopted to provide answers and solutions to the study's emphasis.
- An exploratory study allowed the researcher to use different methods of inquiry such as interviews to assess the cases' poor service delivery in the study area.
- This design facilitated a thorough understanding of the study as the municipal workers were interviewed thereby enabling the researcher to obtain the historical cause of the study problem.

However, this study adopted an empirical and non-empirical methodology. Lapan, Quartaroli and Riemer (2012) argue that methodology is a branch of science that invents new ideas, strengthens concepts, rationales, and theory formulations. In Clough and Nutbrown's (2012) view, research methodology is a definition and work plan created during the process of designing a study, while Trainor and Graue (2013) maintain that methodology is a structure that justifies the use of methods. The non-empirical methodology adopted in this study is the literature review, and Leedy and Omrod (2014:51) defined literature review as the analysis of what other scholars have studied about a study subject. According to Lapan *et al.* (2012) and Rubin and Rubin (2012), the literature review incorporates an analysis of secondary sources to promote the creation of appropriate steps for resolving the problem of a study. An extensive record review and document analysis of past legislation guiding the provision of service in Emfuleni municipality was conducted for this study to find solutions to the study. Table 3.1 presents the alignment of research objectives, questions and instruments adopted to answer the research objectives/questions.

**Table 3.2: The alignment of research aims, questions and data collection instruments**

<b>Research sub-objectives</b>	<b>Research sub-questions</b>	<b>Instruments</b>
To understand the structural composition of water and sanitation management in Emfuleni Local Municipality	What is the structural composition of water and sanitation management in Emfuleni Local Municipality?	Literature review and interviews
To know the status quo of water and sanitation service delivery at Emfuleni Local Municipality.	What is the status quo of water and sanitation service delivery at the Emfuleni Local Municipality?	Interviews
To peruse the factors that affect the sustainable delivery of water and sanitation service in a municipality.	What are the factors that affect the sustainable delivery of water and sanitation services in a municipality?	Literature review and interviews
To peruse measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality	How can water and sanitation service delivery be enhanced at the Emfuleni Local Municipality?	Literature review and interviews.

Source: Researcher

### **3.5 Site selection**

Maree (2015:173) affirms that choosing a site in a study is paramount and O’Leary (2010:162) opines that research sites should be conducive for research purposes. In quantitative terms, a research site is also known as a research population. The research population refers to the group to which the researcher wants to apply or generalise the study findings (O’Leary, 2010:162). The population of this study includes one hundred and seventy-five (175) municipal workers in Emfuleni municipality.

### **3.6 Participant selection**

Relmer and Van Ryzin (2011:170) and Maree (2015:173) state that participant selection involves a process of credible participants to participate in a study in an endeavour to seek solutions to the problem of the study. Thirty municipal workers were chosen purposively for this study and these executives include managers, technical assistants, service delivery maintenance personnel and the administrators. According to Maree (2010:173), purposive sampling is a non-probabilistic type of sampling where participants are selected due to their knowledge and roles in a study focus. These participants were selected because they are knowledgeable and active in the service delivery protocols in Emfuleni Local Municipality.

They are deemed familiar with the service delivery processes; therefore, their responses are considered valid and useful in proffering solutions to the problems of the study. A total of thirty (30) participants were selected for this study. The inclusion criteria of the selected participants include employees who work at Emfuleni Local Municipality at the time of the study and those who work at the water and sanitation department.

### **3.7 Data collecting instruments**

According to Gray (2014), the process of data collection includes the procedure of gathering the respondents' raw information concerning how the problems of the study could be resolved. This study adopted face-to-face interviews as the data collecting instrument. Leedy and Omrod (2010) describe an interview as a way to collect data that helps the interviewer to gather facts, thoughts, attitudes and values by asking the interviewee questions. An interview guide is used in an interview that allows the interviewer to retain the interview flow that helps bring new insights and in-depth observations into the phenomena being examined (Leedy & Omrod, 2010). The interview questions of this study comprised two sections, Sections A and B. Section A gathered the biographical information of the participants and Section B focused on the sub-research objectives of the study. The focus of Section B of the interview guide comprised four sub-sections (B1-B4) and these are explained below:

- Section B1 investigated the structural composition of water and sanitation management in Emfuleni Local Municipality.
- Section B2 perused the status quo of water and sanitation service delivery at Emfuleni Local Municipality.
- Section B3 sought the factors that affect the sustainable delivery of water and sanitation services in a municipality.
- Section B4 perused measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality.

#### **3.7.1 Researcher's role**

During the interview section the researcher observed the following protocols:

- An introduction was made where the researcher introduced herself and the nature of the study; also, the researcher appreciated the opportunity provided by the interviewee to participate in the study.

- There was an assurance that all the discussions will be highly confidential and/or anonymous.
- A clarification was made that participation in the research process is voluntary and that respondents are assured of being able to leave on request.
- The life and safety of the participants were guaranteed to be secured.
- The interviewer addressed the purpose of the research, the goals of the research, and the type of responses needed.
- A request was made that the best opinion on the interview questions as well as on the follow-up questions should be provided.
- All interviews were recorded with field notes to avoid confusion of facts, which improved the accuracy of data collection.
- Clear communication took place as the interview was conducted in a reasonable and simple English language, which the respondents could understand.
- The interview period lasted for 20 minutes to minimise the participants' boredom.
- At the end of the interview, an appreciation was shown to the participants for their support, empathy and considerate answers.

### **3.8 Data analysis**

Research data are useless and meaningless until it is analysed and discussed. In this case, Gray (2014:136) contends that data analysis refers to the interpretation of raw information that was gathered from the respondents in order to provide a detailed answer to the research problem. In this study, data obtained through interviews were analysed about the study's objective. Atlas.ti software (version 8.2) was used to analyse data after it was transcribed to a readable text. Afterward, the analyses were presented as a network diagram representing the themes and categories of findings and these were discussed subsequently. The processes observed in the process of data analysis are further expounded upon in Table 3.2.

**Table 3.2 Data analytical steps**

<b>Step</b>	<b>Method</b>	<b>Explanation</b>
1	Organising data	All interviews were transcribed and kept in a readable format for further analysis.
2	Review of transcripts	Data were checked to master the contents and ensure that they represent the direction of the report.
3	Initiating coding	The themes and categories that were recognised were labelled
4	Coding of data	The coding method was used to organise the related data to link together related headings with similar information. These developed the thematic categories.
5	Representation of data	The findings that emerged in this study were represented in themes and categories in Atlas-ti network diagram.
6	Interpretation and summarising of findings	In this section, the interpretations of results was made basing on the research questions of the study and this was corroborated with the literature review.

The next section presents the trustworthiness of the study.

### **3.9 Trustworthiness of the study**

Trustworthiness is a set of standards designed to assess the consistency of a study (Bryman, 2012:717). Therefore, trustworthiness can be viewed as how qualitative researchers ensure that their work demonstrates transferability, integrity, precision and confirmability (Susanne, 2012:1). In this study, trustworthiness was developed through member checking. Furthermore, to ensure consistency and dependability, the defined themes and categories were discussed with the participants. Results from interviews of the study were also triangulated to provide accurate findings in respect of common themes. External validity is used to generalise to the broader population from the study sample (Susanne, 2012:1). Throughout this study, the researcher carefully selected the sampling techniques (purposive sampling) that were most appropriate for this analysis to build confidence in the type of data collected. To maintain objectivity, the researcher also distanced herself from the participants to minimise bias to avoid distorting information from the interviewees. To maintain credibility and to achieve referential adequacy, the interviewer employed the use of an audiotape recorder to capture the verbatim responses of the interviewees. Also, peer debriefing was attained by employing knowledgeable people in the field of study to scan the researcher's interpretations and initial findings to decide if the study achieved its predetermined objectives.

### **3.10 Ethical considerations**

Ethics in its basic sense depict the standards of conduct that help determine what is appropriate within the research field (O’Leary, 2010:41). However, the ethics of conducting research vary across various professional codes or disciplines and/or organisations, but generally, appropriate guidelines exist. The ethical guidelines considered in this study are outlined as follows:

- The Faculty of Economic and Management Sciences was contacted for the approval of the study.
- A clearance certificate and ethics number was given by the Faculty of Economic and Management Sciences in authentication to the approval of the study.
- During the study, the researcher contacted the participants and the date of the interviews was agreed.
- There was an agreement between the researcher and the participants that participation is voluntary while they can leave at will.
- The researcher informed the participants that all their answers would be kept anonymous and their lives are protected should they participate in the study.
- During the reporting process, the researcher reported both negative and positive findings.

### **3.11 Chapter summary**

This chapter provided the research methodology applied in this study to find answers to the research problem. The social constructivist paradigm was adopted in this study, which encouraged the interactions between the researcher and participants in an endeavour to find solutions to the study. A qualitative research approach and an exploratory design were selected in the study, which enabled the researcher to use interviews to understand the problems surrounding water and sanitation delivery in Emfuleni municipality. A site was selected while participants were selected and interviewed. Data collected in this study were analysed using Atlas.ti software (version 8.2). Trustworthiness was ensured in this study while the applicable ethical considerations were employed.

The next chapter presents the research results of the study.

## **CHAPTER 4**

### **PRESENTATION OF RESEARCH RESULTS**

#### **4.1 Introduction**

This chapter presents the research results captured from audio tapes during the face-to-face interviews with the municipal workers. The interviews focused on the four sub-research questions of the study. During the interview sessions, the researcher used an interview guide to regulate the flow of the interviews. It should be noted that all ethical considerations applicable to this study were observed. Concerning the response rate, the researcher estimated to interview 30 participants; unfortunately, Twenty-nine participants were interviewed making a 96.7% response rate. Serame (2011) indicates that if at least a 70 percent response rate is reached, a researcher will make a reasonable conclusion and therefore, with a response rate of 96.7 percent, this study collected sufficient data to arrive at a credible conclusion.

#### **4.2 Presentation of results**

This section presented the research results following the order of the interview guide. After the transcription of the interviews, the Atlas.ti software (version 8.2) was used to analyse the data in a comprehensible format. In the presentation phase, the biographical information of the participants was presented and this was followed by the themes and categories of responses that emerged from the interview. Also, to maintain the anonymity of responses in the study, the researcher attributed pseudo names to all the participants of the study. The first participant was given the name PA1, second participant PA2 ...and twenty-ninth participant PA29.

#### **4.3 Presentation of biographical information of participants**

The biographical information gathered in this section includes gender, age, years of experience, race and the highest academic qualification. Tables and charts were used to present this information obtained from the datasets. All the figures and tables in this chapter are the primary sources of the study.

##### **4.3.1 Gender of the participants**

During the interview session, the researcher recorded the gender of the respondents and this is presented in Table 4.1.

**Table 4.1 Gender**

Gender	Frequency
Males	16
Females	13
<b>Total</b>	<b>29</b>

Table 4.1 portrayed that more males are participating in Emfuleni local municipal water and service delivery than females. This further reflects in South Africa's gender inequality agitation where it is discovered that men hold more positions than women in the public service.

#### 4.3.2 Age group

Concerning the age of the participants, data gathered by the researcher are summarised in Table 4.2.

**Table 4.2 Age groups**

Age group in years	Frequency
26-30	2
31-35	3
36-40	9
Above 40	15
<b>Total</b>	<b>29</b>

Table 4.2 portrays that more respondents are above 40 years and could be deemed knowledgeable in their various fields.

#### 4.3.3 Race

During the interview session, the researcher asked the participants to indicate their races and this is summarised in Table 4.3.

**Table 4.3: Racial background**

<b>Race</b>	<b>Frequency</b>
Black	10
Coloured	6
White	10
Asian	3
<b>Total</b>	<b>29</b>

The information presented in Table 4.3 depicts that workers in Emfuleni Local Municipality who pioneer water and sanitation service delivery are from various racial backgrounds, which are dominated by black and white persons.

#### 4.3.4 Years of experience

The researcher asked the participants to indicate their years of experience in service delivery, their responses are captured in Table 4.4.

**Table 4.4 Years of experience**

<b>Number of years worked in the municipality</b>	<b>Frequency</b>
5-10	2
11-15	8
16-20	5
21-25	6
26-30	8
<b>Total</b>	<b>29</b>

Table 4.4 depicts that all the participants have worked for more than five years in the municipal service delivery logistics. Their responses are, therefore, relevant as they are considered knowledgeable in their fields.

#### 4.3.5 Highest qualification in education

Furthermore, the researcher asked the participants their highest educational qualification and their responses are captured in Table 4.5.

**Table 4.5 Highest academic qualification**

<b>Highest qualification obtained</b>	<b>Frequency</b>
Matric	5
Certificate	4
Diploma	1
Bachelors	7
Honours degree	5
Master's degree	7
<b>Total</b>	<b>29</b>

According to Table 4.5, participants have good academic standing as six participants have bachelor to master's degrees and this denotes versatility in their field.

The next section presents the responses from the respondents in the four sub-research objectives.

#### **4.4 Presentation of responses from research objectives**

This section presents the responses from participants on each research question. It should be noted all the participants (PA1-PA29) participated in these sections. The responses from PA1 to PA29 are represented in themes and categories. Themes represent the research questions/objectives while the categories represent the responses from the participants. Pseudo

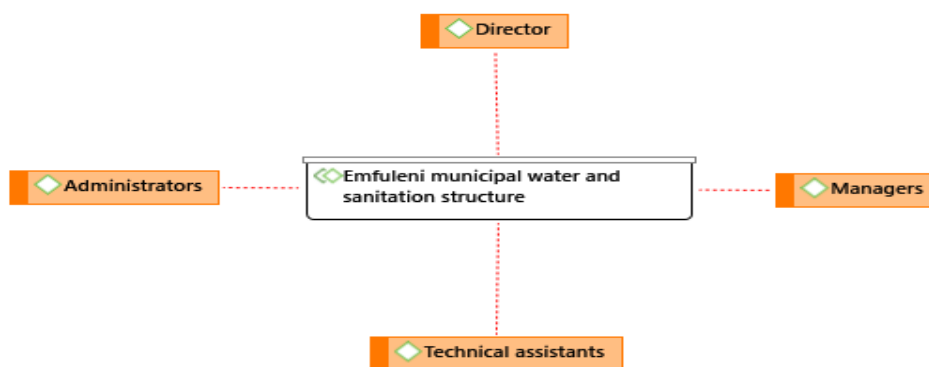
names were used to represent each participant on each significant comment made on each research objective. Afterward, these findings were corroborated with the literature review findings to provide a comprehensive view of the study in an endeavour to provide answers to the research objectives. The objectives of the study followed are as follows:

- To understand the structural composition of water and sanitation management in Emfuleni Local Municipality.
- To know the status quo of water and sanitation service delivery at Emfuleni Local Municipality.
- To peruse the factors that affect the sustainable delivery of water and sanitation service in a municipality.
- To peruse measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality

The next section presents the participants’ responses to research objective 1.

#### 4.4.1 Participants’ responses on research objective 1

Objective 1 sought to know the structural composition of water and sanitation management in Emfuleni Local Municipality. The participants that participated in this section include PA1 to PA29. Their responses on the structure of Emfuleni municipal water and sanitation structure are summarised in Figure 4.1.



**Figure 4.1: Emfuleni municipal water and sanitation delivery structure**

According to Figure 4.1, the participants concurred that the structural composition of Emfuleni local municipality consists of the director, managers, technical assistants and the administrators. The participants further affirm that the administration of the water and

sanitation delivery is controlled by the chief director who is at the apex authority but, unfortunately, this position has been vacant for years. The next positions in the hierarchy are the three (3) sectional managers who occupy positions such as *planning and projects*, *operations* and *customer care*. The managers (planning and projects, operations, and customer care) are entrusted to facilitate effective and efficient water and sanitation service delivery in their various dimensions with the collaboration of other functional departments. Their job specification includes ensuring effective management such as procuring the needed materials, planning and projects, and communication. The technical assistants are the next in the hierarchy that consists of the technical engineers (construction), technical engineers (works), assistant manager (water), assistant manager (sanitation), assistant manager (water care) and assistant manager (maintenance). All these assistants help to ensure equitable delivery of water and sanitation service. However, the participants highlighted that all the assistant managerial positions are vacant except the assistant manager (sanitation).

The responses from the participants on the structural composition of Emfuleni water and sanitation delivery correspond with the literature review findings of this study. The documents obtained from the Human Resource Department of Emfuleni Municipality (2020) agree that the structural composition of the water and sanitation delivery incorporates the director, managers and assistants. However, the study discovered that some positions are still vacant to date, which endangers the functionality of the municipality. The systems theory as postulated by Mele *et al.* (2010:129) and Coetzee and Van Niekerk (2012:3) depicts that the poor performance of one unit in a system will invariably affect the functionality of the whole system. Manyaka (2014:127) and Mele *et al.* (2010:136) point out that effective administration and success lie in the hands of administrators; therefore, management should be a complete package, thereby having a comprehensive knowledge of their goals, growth plans, knowledge of their environments, manage their relationships with internal and external environments, adapt to current circumstances, and also have the ability to cope with tough times.

Some excerpts from the participants are as follows:

PA1, PA2, PA4, PA4, PA7, PA8, PA15, PA16, PA17, PA21, PA24, PA25, PA27 and PA29 said:

*‘The structural composition of water and sanitation delivery comprises of the chief director, three managers and five assistants. These portfolios ensure that*

*there is equitable water and sanitation supply to all residents in Emfuleni local municipality'*

PA15 and PA17 said:

*'These positions are vacant due to political reasons and this has impacted on poor water and sanitation delivery'. The situation of service delivery in this municipality constantly erupts service delivery protests which result in the destruction of buildings and government properties'*

PA29 affirmed:

*'The government should ensure that all these vacant positions should be filled immediately as it is impacting negatively on the delivery of services. Something should be done immediately'*

The next section presents the participants' responses to research objective 2.

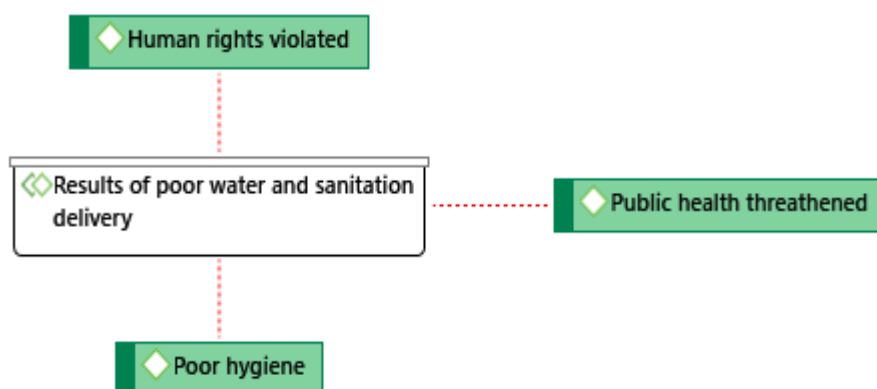
#### 4.4.2 Participants' response to research objective 2

Objective 2 tried to know the status quo of water and sanitation service delivery at Emfuleni Local Municipality. In this category, all the respondents (PA1-PA29) responded to this objective and their responses are summarised in Figure 4.2.



**Figure 4.2: The status quo of water and sanitation delivery at Emfuleni municipality**

According to Figure 4.2, the participants confirmed that the delivery of water and sanitation in Emfuleni Local Municipality is very poor while the water is considered unsafe to drink presently. The participants further indicated the effects of water and sanitation delivery and these are summarised in Figure 4.3.



**Figure 4.3: Results of poor water and sanitation delivery at Emfuleni Local Municipality**

In Figure 4.3, participants portrayed that the poor delivery of water and sanitation is a violation of human rights. They further stated that it threatens public health and constitutes poor hygiene in the municipality.

United Nations (2020:1) affirms that poor water and sanitation delivery is a contentious issue facing the African continent and other parts of the world. United Nations further stated that more than 2.2 billion people are faced with poor water delivery while 4.2 billion people are challenged with adequate sanitation delivery. This has, however, forced people to drink unsafe water and live without improved sanitation conditions, which have threatened their health conditions. Waterborne diseases such as cholera, cryptosporidiosis, campylobacter, leptospirosis, and other harmful algal blooms have been on the increase due to poor service delivery (Department of Health, 2019). In the case of South Africa, Kenyane (2014:305) states that insufficient delivery of service has led to widespread demonstrations and civil strife in many municipalities. Residents boycott the payment for the services consumed because of dissatisfaction with municipalities' poor service provision and these are intended to force service providers to boost the delivery of services. Studies of Enwereji and Uwizeyimana (2020:335) point out that most South African residents have been experiencing poor service delivery and this has led to payment boycotts to gain more from municipalities as democratic dividends.

Summarised excerpts captured during the interview are presented below:

PA1, PA2 confirmed that:

*'We know that the services delivered to the residents are poor but this sometimes comes as a result of poor logistics and breakdown of equipment'.*

PA3, PA4 and PA5 said:

*'We are performing below expectation and this reflects the incessant service delivery protest in our municipality. More so, most residents do not adequately pay for the services consumed and this leads to financial issues resulting in poor service delivery'.*

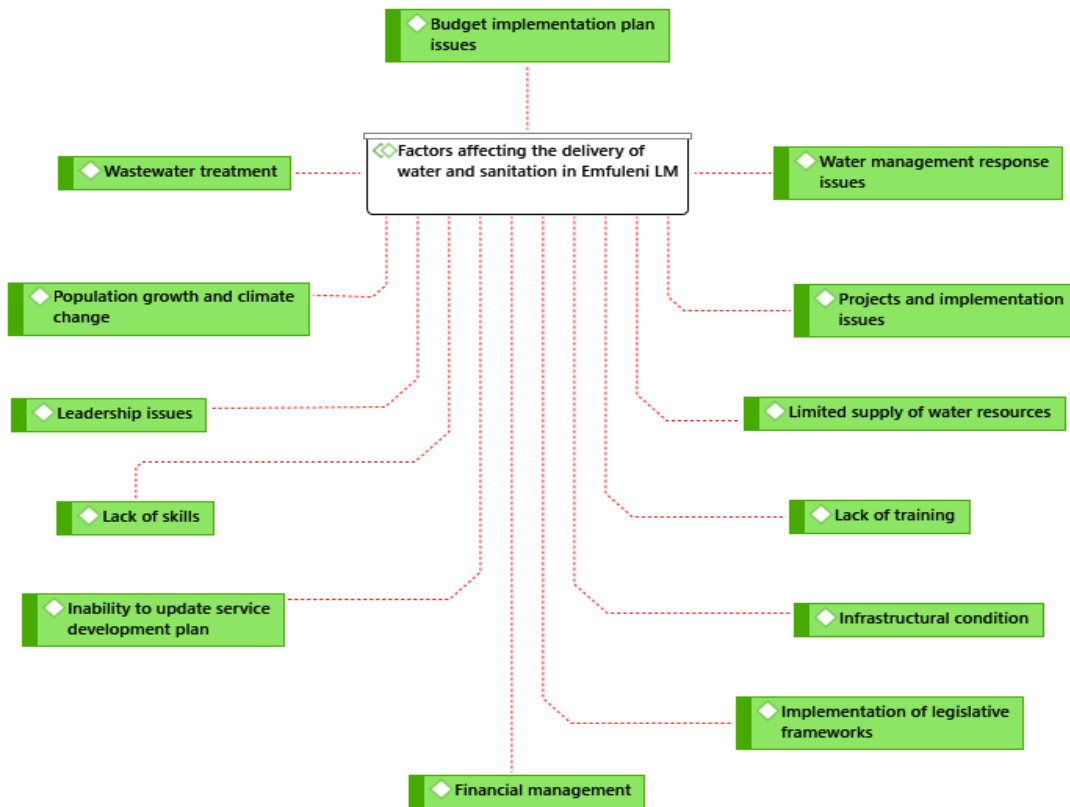
PA16, PA17 and PA28 affirmed:

*'In this municipality, we are facing challenges of effective water and sanitation delivery, the water delivered to residents are sometimes unsafe to drink and this has posed as a health hazard to residents, poor hygienic conditions and this is a violation of human right as enshrined in the Constitution of South Africa'.*

The next section presents the findings in research objective 3.

#### 4.4.3 Participants' responses to research objective 3

As noted in the literature review of the study, several factors limit equitable delivery of water and sanitation delivery in South African municipalities. This section of the study perused the factors that affect the sustainable delivery of water and sanitation services in Emfuleni local municipality. All the participants participated in this section and an in-depth probing was done in this section to know the significant factors inhibiting adequate delivery of services in Emfuleni Local Municipality. The responses from the participants are summarised in Figure 4.4.



**Figure 4.4 Factors affecting the delivery of water and sanitation in Emfuleni municipality**

According to Figure 4.4, participants concurred that the poor water and sanitation delivery in Emfuleni municipality is attributed to the following reasons: budget implementation plan issues, water management response issues, limited supply of water resources, lack of training, infrastructural conditions, implementation of legislative frameworks, financial management, inability to update service development plans, lack of skills, leadership issues, population growth and climate change, and wastewater treatment logistics. An explanation and excerpts of each factor are subsequently elaborated.

**Budget implementation plan issues**

Concerning the participants’ view on budget implementation plans, participants indicated that it is merely a performance tool that views the priorities and goals in achieving set targets. The SDBIP is a good initiative and a good plan, but participants indicated that it needs to be supported with the necessary resources to be able to track progress. The participants further disclosed that SDBIP represents a guiding tool for providing service delivery, but wrongly utilised in Emfuleni municipality as posited by the participants. Naude (2020:1-2) affirms that

the service delivery budget implementation plan (SDBIP) represents a performance management tool that assists in measuring the performance of all the functional departments in the service delivery chain. Naude (2020:2) opines that SDBIP should measure the performance of municipalities and serve as a legislative document that requires that every municipality meets its stipulations. Some excerpts from the participants are as follows:

PA4, PA6, PA9 said:

*‘The SDBIP in this municipality does not effectively guide our conduct, we do things the way we like and it is affecting service delivery’.*

PA13, PA15, PA19 supported:

*‘Our SDBIP is frustrated due to financial issues. We have good plans here to impact service delivery but sometimes we are frustrated due to financial limitations’.*

### **Water management response issues**

A water management response known as turnaround time is very important in achieving prompt service delivery. Interruptions in service supply such as burst pipes, meter leaks, drain blockages, mainline blockages, wastewater treatment works, pump failures and electrical panel failures should be reported immediately. All these interruptions may require repairs or replacements. These interruptions rely on the availability of resources such as personnel, fleet, water pumps, material, sewer rods and mechanical electrical spares. The participants concurred that the municipality does not adhere to the 24 hours as prescribed in the water consumer charter. The departments tend to be more reactive than proactive, which is a challenge that needs to be resolved at the highest level by allocating the necessary required resources to improve on the turnaround time. These findings concur with that of Mokgobu (2017:70) that the inability to respond to water leaks and blockages contributes to poor service delivery in South African municipalities. Some excerpts from this category are as follows:

PA1, PA15, PA17, PA20, PA23, PA25, PA28, PA29 confirmed:

*‘We always attend to leakages but not promptly because of the logistics in the municipality. Sometimes, we have supply issues and lack of materials for maintenance’.*

## **Project identification and implementation issues**

The project identification and implementation inform the Independent Development Plan (IDP) where there should be engagements with the community regarding their needs. The identification and assessment are through liaising with the water and sanitation operation department and through the engagements, shortcomings, and challenges experienced in operations, maintenance and developmental needs are identified or considered. Participants affirmed that there are poor project identification and implementation in Emfuleni municipality. They suggested that there should be consideration of critical areas such as upgrading for operations and maintenance or installation of new infrastructure to allow for development and timely service delivery in Emfuleni municipality. The Department of Provincial and Local Government (2019:11) affirms that new projects should be identified by local municipalities while they should endeavour to uphold a good maintenance culture to achieve sustainable service delivery. Some excerpts from participants are as follows:

PA4, PA7, PA19, PA22, PA23 Affirmed:

*‘Project identification and implementation in this municipality are very poor, the administration lacks good leadership’.*

PA3, PA5, PA8, PA11, PA13 said:

*‘We lack effective management in this municipality, our projects are not effectively implemented, we need strategic leaders who will pioneer the delivery of effective service to residents’.*

## **A limited supply of water resources**

A limited supply of water resources is another issue limiting the supply of water in Emfuleni Local Municipality. Participants attested that the variability of rainfall has resulted in the poor rate of the flow of rivers, dams and boreholes, which are the primary source of water in the municipality. These findings conform to the affirmations of the Department of Water and Sanitation (2015) where it was confirmed that dam levels within the municipality require sufficient rainfall to provide consistent and sufficient water to facilitate the flow of available water sources. Some captured responses are as follows:

PA1, PA2, PA16, PA17, PA21 said:

*The shortage of rainfall is one of the main reasons for the limited water supply. Sometimes the river flows, dams and other sources of water are in short supply which invariably affects water and sanitation delivery.*

### **Training issues**

Lack of training is another factor limiting the delivery of water and sanitation delivery at Emfuleni municipality. Participants indicated that there is a lack of skills training such as refresher courses, especially from middle management to lower management, where there is a gap because, with the new technologies, there is a need for employees to be aware of the changes in technology. This affects how employees deliver the services knowing full well that there are other smarter ways of delivering services other than the normal conventional way. National Business Initiative (2019:5) further confirms the skills shortage in the service delivery sector and indicated the need for skills development and apprenticeship.

PA20, PA21, PA22, PA23, PA24, PA25, PA26, PA29 said:

*'We lack adequate training here, there should be constant training in this municipality to ensure that we get acquainted with the new methodologies in service delivery'.*

PA3, PA4, PA5, PA7 confirmed:

*'We use to organise employee training in this municipality at least twice in a year, presently, it is not done anymore due to lack of financial resources'.*

### **Infrastructural condition**

The deteriorating infrastructural condition in Emfuleni was highlighted by the participants. The participants confirmed that the process of monitoring wastewater and water treatment is currently insufficient due to the non-availability of on-site instruments such as chlorine meters, turbidity meters, ammonia, nitrates, pH, and suspended solids instrumentation to conduct process optimisation. The utilisation of the instruments is to check for water compliance as per the Department of Water and Sanitation Water Use Licence (WUL), IRIS Integrated Water Information System and South African National Standards (SANS 241) for drinking water. Another participant mentioned that the water demand management department struggles with spares such as gauges for measuring pressure and tools for servicing and pressure reducing

valves at the water network. The mechanical and maintenance department continues to struggle with spares such as generators, V-bolts and chain blocks. In the planning and project section, they experience a shortage of stationery and printing equipment that are required when printing plans for the operations and staff maintenance. The water department struggles with water pumps, plumbing toolboxes and dicing machines. The sanitation department struggles with sewer rods and rods couplings. Toxopeus (2019:1) and National Water Research Strategy (2013:53) opine that the infrastructural maintenance has been one of the issues facing water and sanitation delivery in South Africa and this needs urgent attention to guarantee safe and steady drinking water. Some excerpts captured are as follows:

PA10, PA11, PA14, PA16, PA18, PA20 said:

*‘Sometimes we run out of materials for maintenance, also materials for the treatment of water to attain the standard as prescribed by the Department of Water and Sanitation Water Use Licence (WUL)’.*

PA3, PA4, PA7, PA9, PA11 concurred:

*‘In our departments, we are all struggling to deliver water and sanitation equitably due to lack of infrastructure to maintain the water delivery equipment. Adequate procurement of the needed materials is not made due to financial issues’.*

### **Implementation of legislative frameworks**

The implementation of service delivery legislative frameworks is paramount to enhance service delivery to residents. Participants highlighted that some aspects of legislation guiding the service delivery process are not upheld by the municipality such as implementing enforcement measures to mobilise payment for service delivery. Participants further concurred that some residents who vandalise water pipes are not adequately prosecuted and this has recourse and poses a financial burden to the water and sanitation department. In the view of Maake and Holtzhausen (2015:253), municipalities should ensure that strict measures are taken to maintain and regulate water and sanitation delivery to attain sustainability. Also, Enwereji and Kadama (2018:280) pinpoint that municipalities should intimidate residents to always comply with the legislative frameworks to achieve quality service delivery. Some excerpts from the participants are as follows:

PA9, PA12, PA23, PA24, PA27, PA28 said:

*‘The municipality is not strict in the implementation of legislative precepts, most residents do not pay for the services consumed, yet there is no payment enforcement. Some residents vandalise water pipes and nothing is done to them. We need to stand up in this municipality. We need to put things right’.*

### **Financial management**

The facilitation of effective financial management is paramount for organisations to attain their specific goals. Participants in the study pointed out that Emfuleni municipality lacks proper financial management and financial resources to facilitate equitable service delivery. The participants also stated that most repairs and replacements are frustrated due to a lack of financial resources by the municipality. Enwereji and Kadama (2018:279) confirm that adequate financial management is highly needed in businesses, also in municipalities despite not being a business making venture. Summarised excerpts captured in the process of interviews include:

PA12, PA17, PA18, PA19, PA26, PA29 Said:

*‘We need adequate financial management skills in this municipality. Our municipality is owing a lot of money, sometimes we don’t have money to buy the needed materials for maintenance and this affects the level of service delivery’.*

### **Inability to update the service development plan**

Municipalities struggle to update their development plans and this has affected the quality of water and sanitation service delivery in Emfuleni Local Municipality. The participants said that the Water Services Development Plan (WSDP) was last updated in 2007. The WSDP plan indicates certain projects and replacements programmes that need to be implemented in the municipality. The municipality currently does not have capital available to update the WSDP, including the implementation of the projects. The planning and project departments normally request funding from national and provincial governments because of financial constraints. Due to the municipal infrastructure being too old and growth rate within the area being so high, projects need prioritisation, water and sanitation projects are so expensive and it becomes a challenge to implement, some of the projects have to be removed or postponed to other financial years. Toxopeüs (2019:10) affirms that municipalities do not adequately update their

water service development plans and this has affected service delivery in most municipalities in South Africa. Some excerpts from the participants are as follows:

*PA2, PA3, PA6, PA9, PA10, PA11, PA14 affirmed:*

*‘The updating of WSDP has been a problem since 2007, we have financial issues that cripple our projects. We even cancel or postpone some projects to future financial years because of financial resources’.*

### **Lack of skills**

Skills shortage is one of the main frustrations towards the delivery of equitable water and sanitation service in Emfuleni local municipality. The participants attested that more professionals such as engineers are needed in the municipality. The findings in this section conform to the speech of Auditor General (2019) where it was stated that South African municipalities experience inadequate service delivery due to lack of proficient skilled workers such as engineers, technical assistants, financial professionals and strategic managers. Some excerpts captured are as follows:

*PA2, PA15, PA16, PA20, PA21, PA23, PA28 said:*

*‘We need skilled and experienced staff especially, engineers and technical assistants. Sometimes we have to contract external professionals to work for us which is very expensive’.*

### **Leadership issues**

Organisations need exceptional leaders who will be capable to direct them to the right path. Without good leaders, organisations are bound to fail. Participants attested that they need strategic leaders who will understand the need of external environment and formulate strategies to resolve issues. However, some participants indicated that so many leadership positions are vacant in the municipality and this has resulted in poor performance of some sectors in the water and sanitation department. In the view of Louw and Venter (2012:35), a strategic leader understands the nature of the internal and external environment and creates desired changes within the organisational system. In this regard, municipalities should position good leaders who should provide strategic leadership in all aspect of governance. Some excerpts from participants are as follows:

PA17, PA18, PA19, PA21, PA22, PA26, PA27 said:

*‘We need good leaders in this municipality but you can see that most positions are vacant here, we don’t know why these positions are still vacant. We are not making any progress in this municipality, it is a leadership issue’.*

### **Population growth and climate change**

Population and climate change are other vital factors that affect water and sanitation service delivery in Emfuleni Local Municipality. An increase in population has intensified the challenge for municipalities to increase water supply. Also, the rate of evaporation and continuous heating of the atmosphere has decreased the availability of water. The participants concurred that the impact of climate change is a serious concern towards the provision of essential services to the residents. The findings of the Intergovernmental Panel on Climate Change (IPCC) (2014) affirm that the desire to improve citizens’ access to water (both rural and urban) continues to put more stress on the hydrological system as a result of growing human need and climate change. Excerpts captured during the interviews are as follows:

PA1, PA2, PA3, PA4, PA11, PA12, PA13, PA14 said:

*‘Climate change has contributed to the problems we have here. The population is growing and the source of water is decreasing, we need to do something about this urgently’.*

### **Wastewater treatment**

Wastewater treatment is among the challenges municipalities encounter in delivering safe drinking water. Participants concurred that the treatment of water at Emfuleni municipality is a problem as it is crippled by a lack of funding most of the time. Also, they always run out of materials needed for water treatment and some of these materials take time to be procured. Wastewater is considered a plaguing issue within the South African context and this demands a variety of revenue sources (National Business Initiative, 2019:7). Excerpts from some participants are as follows:

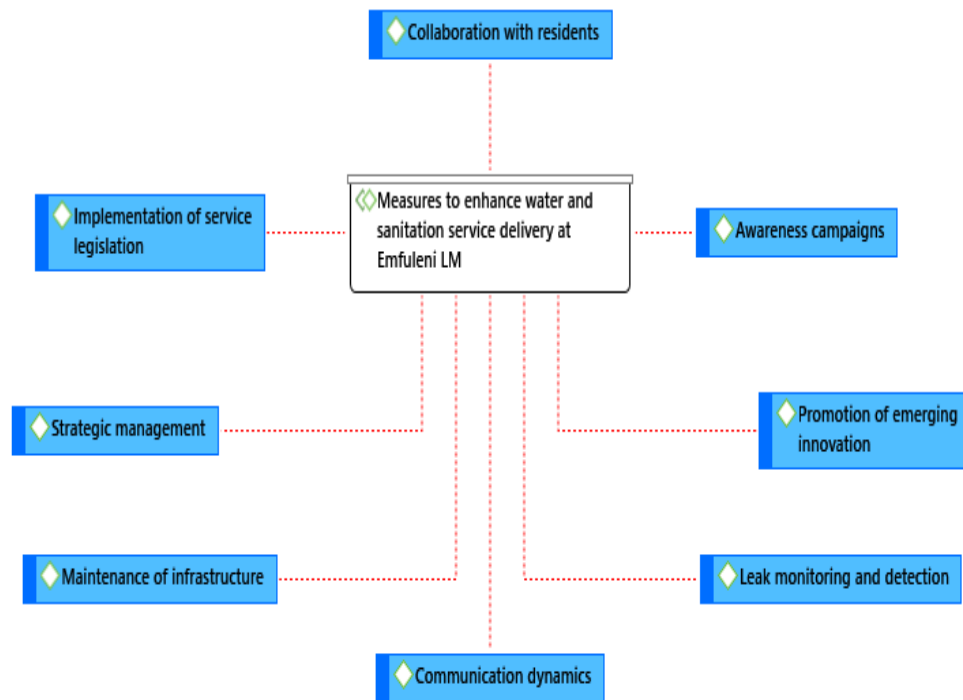
PA13, PA14, PA19, PA22, PA23, PA25, PA29 said:

*‘We need more funding for wastewater treatment, sometimes we don’t have materials for treatment and this is a serious problem towards delivering timeous service to the residents’.*

The next section presents the participants' responses on research objective 4

#### 4.4.4 Participants' response to research objective 4

Objective 4 perused measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality. Participants were asked to indicate the measures to enhance service delivery; their responses are summarised in the Atlas.ti network diagram in Figure 4.5.



**Figure 4.5 Measures to enhance water and sanitation delivery at Emfuleni municipality**

According to Figure 4.5, participants confirmed that collaboration with residents, awareness campaigns, promotion of emerging innovation, leak monitoring and detection, communication dynamics, maintenance of infrastructure, strategic management, and the implementation of service legislation. A brief explanation of these factors is made subsequently.

#### **Collaboration with residents**

Service delivery issues could be resolved through collaborating with the residents; in this regard, Enwereji and Potgieter (2018:230) explained that establishing a payment culture for municipal services could be attained through collaborations. Participants of this study affirmed that Emfuleni municipal workers need to collaborate extensively with the residents to achieve

success in water and sanitation service delivery. The excerpts gathered in this section are presented below:

PA11, PA14, PA17, PA19, PA20, PA22, PA27 affirmed:

*We need to collaborate with the residents...they need to pay for the services consumed...they need to tell us when there are leakages...they need to report to us when people tamper with the water pipes we need effective collaboration with them.*

### **Awareness campaigns**

Awareness campaigns refer to an initiative through a series of communication strategies to create public knowledge regarding an issue of importance (Keuntjes, 2019:1). The participants indicated that public awareness campaigns should always be organised by the municipality to improve water and sanitation delivery in the municipality. In his view, Keuntjes (2019:1) points out that public awareness campaigns are considered as effective measures through which policymakers inspire groups of people to take action on a particular matter that leads to public reforms. The following are the excerpts gathered:

PA2, PA4, PA7, PA8, PA9, PA17, PA21, PA23 said:

*Awareness campaigns are needed in this municipality to achieve success in service delivery. Members of the public will be enlightened on how to use water and issues surrounding sanitation through public awareness campaigns. We need to talk to the residents regularly, we need to teach them to report their matters before concluding that we don't care for them.*

### **Promotion of emerging innovation**

Innovation refers to a process of change where new things such as services or goods are created and this was confirmed by Montgomery and Perry (2011:1) and Atkinson (2013:3) who confirm that innovation can be either a breakthrough or an innovation that can be applied for sustenance. Participants suggested that emerging innovation options are needed to upgrade the level of services provided to the residents. They further indicate that the municipality should adopt payment measures such as EFT, mobile transfers, debit and stop order, and ATM payments as this will enhance the payment for municipal services by the residents. The following excerpts were captured:

PA1, PA6, PA8, PA9, PA11, PA12, PA14, PA16 said:

*We need to upgrade the methods using to deliver our services and we need to ensure that all debts are recovered from the residents. We should diversify the payment options for our services, we don't need to be owed; we need money for efficient service delivery.*

### **Leak monitoring and detection**

Leak monitoring is very essential to protect the available water resources. The participants indicated that the municipality can improve the level of water and sanitation delivery through the installation of leakage sensory machines that will always detect areas where there are leakages. Enwereji and Potgieter (2018:229) pinpoint that municipalities should always find ways to resolve the grievances of the residents to enhance the payment culture for municipalities. Monitoring the leaks and monitoring the sanitation level in the provision of water and sanitation delivery are essential to achieve the service delivery standard as postulated by the Constitution. The following excerpts emerged during the interview session:

PA12, PA17, PA18, PA19, PA21, PA22, PA24, PA28, PA29 attested:

*To achieve equitable service delivery in our municipality, we need to ensure that we attend to all leakages as soon as possible. We need a sensory machine that should detect leakages rather than waiting for residents to report. This will enhance the quality of our service*

### **Communication dynamics**

As noted in Chapter 2 of this study, communication refers to the exchange of understandable information between two or more people (Valentzas & Broni, 2011:117; Wells, 2011:1). The participants of the study affirmed that Emfuleni Local Municipality should diversify the measures used in communicating to residents to enhance their understanding of water and sanitation service delivery. Residents also suggested that services would be improved by adopting communication options such as SMS, e-mails, and the internet to send messages to the residents and other social media options such as WhatsApp, Facebook, and YouTube to send information across the residents should be applied. Excerpts from participants are as follows:

PA4, PA7, PA8, PA11, PA13, PA15, PA17, PA19, PA25, PA26 said:

*We need to communicate adequately...we need to create WhatsApp groups, we need to update our Websites and make it interactive, we need to educate residents using social media platforms, we need to be in touch with residents...this can be only achieved through the application of communication dynamics.*

### **Maintenance of infrastructure**

South Africa's approach to water infrastructure maintenance tends to be overwhelmingly reactive rather than constructive, unnecessarily raising its repair costs and reducing the infrastructural functional life span. The participants concurred that there is a low maintenance culture in Emfuleni municipality, which leads to the decay of infrastructure before it is fixed. More so, Toxopeus (2019:1) sustains that deteriorating infrastructure due to aging and inadequate maintenance has been one of the major problems facing South African municipalities. Some excerpts captured are as follows:

PA1, PA15, PA17, PA20, PA23, PA25, PA28, PA29 confirmed:

*We need to maintain infrastructure for water and sanitation delivery...we don't have a good maintenance culture...we need to change this mentality...it is affecting us negatively. When our machines are old, we need to change it immediately, we don't need to wait till it is not functioning before we make plans for a replacement.*

### **Strategic management**

Strategic management is needed in all municipalities to achieve sound governance and direction. In this regard, Rothaermel (2013:21) and Joyce (2017:105) affirm that strategic management is seen as a philosophy of management on how leaders could provide direction to attain predetermined goals. Participants attested that they need strategic managers who will survey the environment and set targets to achieve the goals of the municipality. The studies of Rothaermel (2013:26) affirm that strategic management is the main success factor for an organisation, as future goals are determined by the present decisions made by the leaders. Some excerpts are as follows:

PA1, PA2, PA3, PA7, PA8, PA10, PA11, PA12, PA16, PA24 said:

*We need strategic leaders who are visionary in this municipality. Our leaders need to analyse the environment and formulate soluble policies to achieve our objectives. We need to do surveys here and determine the satisfaction of our residents...then we can know how best to deliver our services...we need strategic leaders.*

### **Implementation of service legislation**

The enforcement of service legislation is essential to instil order in the provision of service delivery in municipalities. The participants affirmed that the lack of adequate implementation of service legislation is one of the issues limiting the delivery of water and sanitation in Emfuleni municipality. They further confirm that some residents do not comply with the bylaws as there are no strict restrictions on water use. Municipalities could avoid these issues by enforcing the content of law on residents that do default or caught by illegally connecting water supply (Enwereji & Kadama, 2018:284). Some excerpts gathered are as follows:

PA3, PA5, PA8, PA11, PA13, PA 14, PA17, PA19, PA21, PA23, PA25, PA26, PA27, PA28 affirmed:

*We need to enforce all the contents of our legislation and bye-laws. Residents do not take us seriously when we don't punish the offenders. Some people do not pay for services due to our inability to enforce laws guiding non-payment for services. We need to be strict to achieve equitable service delivery.*

The following section presents the chapter summary.

### **4.5 Chapter summary**

This chapter presented the interviews with the twenty-nine (29) municipal workers. It further presented the analysis of the interviews using Atlas.ti software (version 8.2). The biographical information of the participants was presented, followed by the responses obtained from the order of the research objectives/questions. The output of the analysis was presented in Atlas.ti network analysis, which was interpreted and corroborated with the literature review outcomes to seek solutions to the problem of the study.

The next section presents the conclusion of the study.

## **CHAPTER 5**

### **OVERVIEW, FINDINGS, RECOMMENDATIONS AND CONCLUSIONS**

#### **5.1 Introduction**

Chapter 4 presented the presentation and interpretation of the results obtained from participants through face-to-face interviews. This chapter presents the overview of the study, summary of findings, and the recommendations to improve water and sanitation delivery in Emfuleni municipality. The next section presents an overview of the study.

#### **5.2 Overview of the study**

In Chapter 1 of this study, the introduction and background of the study were stated. The problem statement of the study identified that Emfuleni local municipal residents continue to experience poor water and sanitation service delivery due to irregularities in the management capacity of municipal workers. Other topics covered in this chapter include aims of the study, research questions and objectives, importance and benefits of the study, delimitations, research methodology, concept clarification and chapter layout of the study.

Chapter 2 of this study presented the theoretical foundations and literature reviews. Systems and decision-making theories underpinned this study. All the keywords derived from the research questions were reviewed. The topics covered in this chapter include legislation guiding the provision of water and sanitation delivery in municipalities, the structure of Emfuleni water and sanitation delivery, factors affecting water and sanitation delivery, communication and service delivery, emerging innovation and service delivery and strategic management.

In Chapter 3, the research methodology adopted to find the solutions of this study was addressed. The social constructivist paradigm was adopted as the research paradigm, which shaped all the assumptions made in the study. A qualitative research approach and an exploratory design were followed. Other topics presented include site and participant selection, data collecting instrument, data analyses, trustworthiness of the study and the ethical concepts applied in the study.

Chapter 4 presented the results from the empirical investigation and the interpretation of the results. This chapter presented the biographical information of the participants followed by the results obtained from the research questions of the study. The results from the research

questions were further corroborated with the literature review findings to find solutions to enhance the water and sanitation delivery in Emfuleni Local Municipality.

Chapter 5 presents an overview of the study, a summary of the findings and the recommendations of the study. The next section presents a summary of the findings:

### **5.3 Summary of findings**

This section presents the summary of findings obtained from the empirical study and it followed the order of research questions which are:

Objective 1: To understand the structural composition of water and sanitation management in Emfuleni Local Municipality.

Objective 2: To know the status quo of water and sanitation service delivery at Emfuleni Local Municipality.

Objective 3: To peruse the factors that affect the sustainable delivery of water and sanitation services in a municipality.

Objective 4: To peruse measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality.

#### **5.3.1 To understand the organisational structure of water and sanitation management in Emfuleni Local Municipality**

This section perused the organisational structure of water and sanitation management in Emfuleni Local Municipality. This section was included in the study to know if the poor water and sanitation delivery evidenced in the municipality is as a result of poor managerial structure. The study discovered that the structural composition of the management includes the director, three sectional managers, six technical assistants and front desk administrators. The study further discovered that many critical positions have been vacant for some years due to political reasons. It was deduced that the decision-making process and equitable service provision are distorted due to the vacancy of key positions in the structural composition of water and sanitation delivery in Emfuleni Local Municipality.

### 5.3.2 To know the status quo of water and sanitation service delivery at Emfuleni Local Municipality.

This objective investigated the status quo of water and sanitation service delivery at Emfuleni Local Municipality. This objective was included to know the position of service delivery in Emfuleni Local Municipality and to know how the residents feel about the poor service delivery. All the participants in the study contributed in this section. Findings from the study disclosed that there is poor water and sanitation delivery, unsafe drinking water that results in poor hygiene and poor public health of the residents of Emfuleni Local Municipality. Participants further flayed on the poor service provision as witnessed in Emfuleni Local Municipality. Others ardently wish that there should be a change in leadership so that the violation of human rights due to poor service provision would be alleviated. Furthermore, participants further affirm that the poor service provision threatens the status quo of their public health and constitutes to poor hygiene in the municipality.

### 5.3.3 To peruse the factors that affect the sustainable delivery of water and sanitation service in a municipality

This objective perused the factors affecting the delivery of water and sanitation delivery in Emfuleni Local Municipality. This objective was incorporated in the study to identify factors that threatens the delivery of quality water and sanitation in Emfuleni municipality. Findings obtained indicate that budget implementation plan issues, water management response issues, limited supply of water resources, lack of training, infrastructural conditions, implementation of legislative frameworks, financial management, inability to update service development plans, lack of skills, leadership issues, population growth and climate change, and wastewater treatment logistics are the issues hindering equitable service delivery in the municipality. Participants conclusively point to the poor management of water and sanitation delivery as a barrier to delivering equitable services to the residents of Emfuleni Local Municipality.

### 5.3.1 To peruse measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality

The delivery of equitable water and sanitation delivery is deemed necessary in every municipality; this section, however, investigated the measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality. This objective was incorporated in this study to recommend measures to salvage the poor service delivery in Emfuleni municipality. Findings indicate that collaboration with residents, awareness campaigns, promotion of emerging innovation, leak monitoring and detection, communication dynamics, maintenance

of infrastructure, strategic management, and the implementation of service legislation would go a long way to improve the quality of water and sanitation delivery in Emfuleni municipality. Highlights obtained from this section indicate that the current nature of poor service provision in Emfuleni local municipality could be salvaged if municipal management could, above all, apply strategic leadership, and other recommendations made in this study.

The next section presents the recommendation of the study.

#### **5.4 Recommendations of the study**

The recommendations of this study are made to the employees in the water and sanitation delivery department of Emfuleni municipality and the residents.

##### **5.4.1 Theoretical recommendations**

The theoretical recommendations are as follows:

- Emfuleni municipality should adopt the systems theory to ensure that all the structural compositions function efficiently to achieve equitable service delivery. The systems emphasise the need for departments to have comprehensive knowledge of their goals, growth plans, knowledge of their environments, manage their relationships with internal and external environments, adapt to current circumstances, and also have the ability to cope with tough times.
- Also, the adoption of this theory will enhance effective communication, which will gain knowledge from external environments, adapt to current circumstances, and also have the ability to cope with tough times.
- The decision-making theory should be adopted and this will help the employees to make logical selections from alternatives to solve problems of the municipality. This implies that a rational choice should be applied to enhance the effectiveness of work and to enhance organisational direction in an endeavour to enhance water and sanitation delivery.

##### **5.4.2 Recommendations to the municipal workers**

The following recommendations are made to the municipal workers:

- All the vacant positions should be filled immediately to enhance management capacity.
- Equitable water and sanitation delivery should be guaranteed in the municipality to meet up with the mandates as stipulated by the Constitution of South Africa.

- Efficient budgets should be made and implemented adequately.
- There should be quick water management response issues to avoid wastages and to enhance the quality of service.
- The municipality should source other means of water supply such as partnering with water boards or water service providers to supply, operations and maintenance of water infrastructure in the Municipality jurisdictions since there is a limited resources.
- The municipality should train the staff to attain quality delivery of water and sanitation.
- The infrastructure should always be maintained or replaced to eradicate deterioration
- All the legislative frameworks should be enforced to enhance payment for the services consumed.
- Equitable financial management should be employed by the management to ensure that the maintenance of infrastructure and replacements are not frustrated by finance.
- The management should always update service development plans.
- There should be on-the-job training to enable employees to acquire more skills.
- The municipality should engage strategic leaders who should always thrive to attain the objectives of the municipality.
- The wastewater treatment logistics should be effectively facilitated.
- The municipal workers should always collaborate with residents.
- The municipality should always organise awareness campaigns to educate residents.
- The promotion of emerging innovation should always be facilitated to upsurge the methods of payment.
- The municipality must adopt emerging communication dynamics to ensure that they communicate to all residents and at the quickest possible time.

#### 5.4.3 Recommendations to the residents

The following recommendations are made to the residents:

- The residents are required to report leakages to the municipality as soon as possible.
- The residents should always abide by the social contract law by paying their municipal bills consistently and timeously as this will enable the municipality to provide more services.
- Residents should abide by all the legislation and by-laws guiding the provision of water and sanitation.

- The residents should be good citizens and should not vandalise government property or tamper with the water pipes.
- Reports should always be tendered to the municipal management rather than embarking on riotous protests.

## **5.5 Conclusion**

This study perused the water and sanitation delivery in Emfuleni Local Municipality as service delivery has been a deputed issue in the area. Four major objectives underpinned this study, which were to understand the structural composition of water and sanitation management in Emfuleni Local Municipality; to know the status quo of water and sanitation service delivery; to peruse the factors that affect the sustainable delivery of water and sanitation service in a municipality; to peruse measures to enhance water and sanitation service delivery at the Emfuleni Local Municipality. A qualitative research approach and an exploratory design were selected, which enhanced the findings of this study. Data were collected from twenty-nine (29) municipal workers and were analysed using Atlas.ti software (version 8.2). The results of the study were corroborated with the literature review to provide answers stated in the problem statement of the study. Findings obtained from the study depict that the poor service delivery witnessed at Emfuleni municipality is as a result of inefficient management of available human and material resources. Findings further disclosed that poor service delivery could be salvaged if the municipality should employ strategic management options and adopt all the recommendations made by this study. Above all, the adoption of communication dynamics and emerging innovation options should be highly embraced by the role-players of Emfuleni municipality to achieve equitable service delivery. As stated in the introduction of this study, Emfuleni Local Municipality will succeed in delivering equitable water and sanitation mandates if the municipal employees embark on successful implementation plans to mobilise revenue from consumers, implement a holistic water conservation and demand management programmes, embark on developing and upskilling its employees and provision of necessary resources to water and sanitation operational and maintenance services department are well resourced in order to perform their duties in service delivery. Areas for future research will focus on water demand and water conservation management challenges in Emfuleni Municipality. Factor that leads to pollution of Vaal river in Emfuleni Municipality jurisdiction.

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**APPENDIX A**  
**INTERVIEW GUIDE FOR COUNCIL MUNICIPAL WORKERS**

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## **INTERVIEW GUIDE FOR MUNICIPAL WORKERS**

These face-to-face interviews are aimed at gaining insight into and knowledge on water and sanitation delivery in Emfuleni Local Municipality in Gauteng Province. The main aim of this study is to identify key challenges that impact water supply and sanitation service delivery in Emfuleni Local Municipality. The main focus of this interview is to understand the level of service delivery and how to enhance water and sanitation service delivery at the Emfuleni Local Municipality. This interview allows individual participants some freedom to talk about what is of interest or importance to them. The interviewer controls the pace of the interview by treating the interview questions in a standardised and straightforward manner. The same set of questions will be used for all interviews and these will be asked in the same order or sequence.

**Participants: The participants selected to participate in this study include the employees at water and sanitation delivery in Emfuleni Local Municipality.**

Employees at the water and sanitation delivery department have been selected in the study in order to gain insights into how the municipality delivers water and sanitation to residents residing in the municipal land. Also, the interview will make an inquiry in order to know how to enhance the delivery of water and sanitation delivery.

### **Resources required**

A suitable venue would be required for conducting the in-depth interviews. Ideally the venue should be on the municipal council in the offices of the selected participants. A notepad and audio recorder will be used during the interview session with prior approval of the participant.

### **Introduction phase**

Good day, my name is JT Mathunzi, a master's degree student from the North-West University. This face-to-face interview is aimed at gaining your insight into the level of service delivery at Emfuleni Local Municipality. This interview is structured to know how to improve service delivery in this municipality. This interview will only last for 20 minutes and your concise and unbiased responses will be appreciated. Any information provided in this exercise is considered confidential, it will not be used against you in any way. More so, participation is only voluntary as you may withdraw at any point in time. Also, the results of this study will be open for scrutiny, and you may request a copy of the results if you wish.

Please note that this interview is recorded to ensure that your comments and contributions are adequately captured for processing purposes. However, your name will not be attached to any comments, views presented and/or perceptions expressed. Do you have any questions in this regard before we continue?

### **Interview phase**

[Ensuring that adequate notes are taken and the tape recorder is recording correctly.]

#### **Section 1: Demographic data**

**1. What is your gender?**

- Female
- Male

**2. What is your age?**

- 21 to 25
- 26 to 30
- 36 to 40
- Above 40

**3. What is your race**

- Black
- Coloured
- White
- Asian

**4. How many years have you been working for Emfuleni Local Municipality?**

- 1 to 5
- 5 to 10
- 11 to 15
- 16 to 20
- 21 to 25
- 26 to 30
- Above 30

**5. What is the highest qualification you have completed?**

- Matric
- Certificate
- Diploma
- Bachelor degree
- Honours degree
- Master's degree
- PhD

**Section 2 Questions from research objectives**

- What is the structural composition of water and sanitation management in Emfuleni Local Municipality?
- What is the status quo of water and sanitation service delivery at the Emfuleni Local Municipality?
- What are the factors that affect the sustainable delivery of water and sanitation services in a municipality?
- How can water and sanitation service delivery be enhanced at the Emfuleni Local Municipality?

**THANK YOU FOR YOUR THOUGHTFUL RESPONSES...I APPRECIATE IT.**

**APPENDIX B**  
**Consolidated results**

This is the consolidated results from the interview section with the participants.

### **Section A: Biographic information of the participants**

#### (1) Gender of the respondents

Key: 1=Male, 2=Female

PA1-1, PA2-1, PA3-1, PA4-2, PA5-1, PA6-1, PA7-1, PA8-2, PA9-1, PA10-2, PA11-2, PA12-2, PA13-1, PA14-1, PA15-1, PA16-1, PA17-2, PA18-2, PA19-2, PA20-2, PA21-2, PA22-1, PA23-1, PA24-1, PA25-1, PA26-1, PA27-2, PA28-2, PA29-2

#### (2) Age group

PA1-26, PA2-45, PA3-37, PA4-31, PA5-49, PA6-33, PA7-39, PA8-60, PA9-37, PA10-38, PA11-2, PA12-45, PA13-26, PA14-42, PA15-45, PA16-48, PA17-48, PA18-36, PA19-55, PA20-50, PA21-44, PA22-43, PA23-41, PA24-40, PA25-38, PA26-39, PA27-35, PA28-38, PA29-59

#### (3) Race

Key: B=Black, C=Coloured, W=White, A=Asian

PA1-A, PA2-B, PA3-C, PA4-W, PA5-W, PA6-A, PA7-B, PA8-C, PA9-C, PA10-B, PA11-W, PA12-W, PA13-C, PA14-B, PA15-W, PA16-C, PA17-B, PA18-W, PA19-B, PA20-W, PA21-W, PA22-W, PA23-B, PA24-C, PA25-B, PA26-A, PA27-B, PA28-W, PA29-B

#### (4) Years of experience

PA1-5, PA2-22, PA3-11, PA4-23, PA5-21, PA6-14, PA7-26, PA8-27, PA9-12, PA10-29, PA11-28, PA12-16, PA13-13, PA14-30, PA15-11, PA16-12, PA17-26, PA18-29, PA19-20, PA20-29, PA21-22, PA22-15, PA23-22, PA24-17, PA25-9, PA26-15, PA27-18, PA28-20, PA29-24

#### (5) Highest qualification in education

Key: M=Matric, C=Certificate, D=Diploma, B=Bachelors, H=Honours, M=Masters

PA1-B, PA2-C, PA3-H, PA4-B, PA5-M, PA6-H, PA7-B, PA8-M, PA9-M, PA10-M, PA11-H, PA12-M, PA13-C, PA14-M, PA15-M, PA16-B, PA17-M, PA18-M, PA19-B, PA20-M, PA21-C, PA22-H, PA23-C, PA24-M, PA25-B, PA26-D, PA27-B, PA28-M, PA29-H

## **Section B**

### Responses from research questions

The direct responses from the participants on each research question were documented in this section. However, it should be noted that only outstanding results are documented.

(1) Research question 1: The structural composition of Emfuleni Local Municipality

Participants= PA1-PA29

PA2 *'The structural composition of water and sanitation delivery comprises of the chief director, three managers and five assistants. These portfolios ensure that there is equitable water and sanitation supply to all residents in Emfuleni local municipality'* (Affirmed by PA1, 2, 4, 6, 7, 8, 15, 16, 17, 21, 24, 25, 27, 29)

### **Highlights from participants**

PA15 *'These positions are vacant due to political reasons and this has impacted on poor water and sanitation delivery'. The situation of service delivery in this municipality constantly erupts service delivery protests which result in the destruction of buildings and government properties'*

PA29 *'The government should ensure that all these vacant positions should be filled immediately as it is impacting negatively on the delivery of services. Something should be done immediately'*.

(2) Research question 2: The status quo of water and sanitation delivery at Emfuleni municipality

Participants= PA1-PA29

The water service provision in Emfuleni municipality is very poor. The water is very unsafe to drink, while the sanitation condition is very poor. This was affirmed by PA1, PA2, PA4, PA7, PA9, PA10, PA12, PA13, PA15, PA16, PA17, PA19, PA20, PA21, PA22, PA23, PA24, PA25, PA26, PA27, PA28 and PA29.

### **Highlights from participants**

PA1, PA2: *'We know that the services delivered to the residents are poor but this sometimes comes as a result of poor logistics and breakdown of equipment'*.

PA3, PA4 PA5: *'We are performing below expectation and this reflects the incessant service delivery protest in our municipality. More so, most residents do not adequately pay for the services consumed and this leads to financial issues resulting in poor service delivery'*.

PA16, PA17 and PA28: *'In this municipality, we are facing challenges of effective water and sanitation delivery, the water delivered to residents are sometimes unsafe to drink and this has posed as a health hazard to residents, poor hygienic conditions and this is a violation of human right as enshrined in the Constitution of South Africa'*.

(3) Research question 3: Factors affecting the delivery of water and sanitation in Emfuleni municipality

Participants= PA1-PA29

The participants affirmed budget implementation plan issues, water management response issues, limited supply of water resources, lack of training, infrastructural conditions, implementation of legislative frameworks, financial management, inability to update service development plans, lack of skills, leadership issues, population growth and climate change, and wastewater treatment logistics

### **Highlights from participants**

PA4, PA6, PA9: *'The SDBIP in this municipality does not effectively guide our conduct, we do things the way we like and it is affecting service delivery'*.

PA13, PA15, PA19: *'Our SDBIP is frustrated due to financial issues. We have good plans here to impact service delivery but sometimes we are frustrated due to financial limitations'*.

PA1, PA15, PA17, PA20, PA23, PA25, PA28, PA29 *'We always attend to leakages but not prompt because of the logistics in the municipality. Sometimes, we have supply issues and lack of materials for maintenance'*.

PA4, PA7, PA19, PA22, PA23: *'Project identification and implementation in this municipality are very poor, the administration lacks good leadership'*.

PA3, PA5, PA8, PA11, PA13: *'We lack effective management in this municipality, our projects are not effectively implemented, we need strategic leaders who will pioneer the delivery of effective service to residents'*.

PA1, PA2, PA16, PA17, PA21: *The shortage of rainfall is one of the main reasons for the limited water supply. Sometimes the river flows, dams and other sources of water are in short supply which invariably affects water and sanitation delivery.*

PA20, PA21, PA22, PA23, PA24, PA25, PA26, PA29: *'We lack adequate training here, there should be constant training in this municipality to ensure that we get acquainted with the new methodologies in service delivery'.*

PA3, PA4, PA5, PA7: *'We use to organise employee training in this municipality at least twice in a year, presently, it is not done anymore due to lack of financial resources'.*

PA10, PA11, PA14, PA16, PA18, PA20: *'Sometimes we run out of materials for maintenance, also materials for the treatment of water to attain the standard as prescribed by the Department of Water and Sanitation Water Use Licence (WUL)'.*

PA3, PA4, PA7, PA9, PA11: *'In our departments, we are all struggling to deliver water and sanitation equitably due to lack of infrastructure to maintain the water delivery equipment. Adequate procurement of the needed materials is not made due to financial issues'.*

PA9, PA12, PA23, PA24, PA27, PA28: *'The municipality is not strict in the implementation of legislative precepts, most residents do not pay for the services consumed, yet there is no payment enforcement. Some residents vandalise water pipes and nothing is done to them. We need to stand up in this municipality. We need to put things right'.*

PA12, PA17, PA18, PA19, PA26, PA29: *'We need adequate financial management skills in this municipality. Our municipality is owing a lot of money, sometimes we don't have money to buy the needed materials for maintenance and this affects the level of service delivery'.*

PA2, PA3, PA6, PA9, PA10, PA11, PA14: *'The updating of WSDP has been a problem since 2007, we have financial issues that cripple our projects. We even cancel or postpone some projects to future financial years because of financial resources'.*

PA2, PA15, PA16, PA20, PA21, PA23, PA28: *'We need skilled and experienced staff especially, engineers and technical assistants. Sometimes we have to contract external professionals to work for us which is very expensive'.*

PA17, PA18, PA19, PA21, PA22, PA26, PA27: *'We need good leaders in this municipality but you can see that most positions are vacant here, we don't know why these positions are still vacant. We are not making any progress in this municipality, it is a leadership issue'.*

PA1, PA2, PA3, PA4, PA11, PA12, PA13, PA14: *'Climate change has contributed to the problems we have here. The population is growing and the source of water is decreasing, we need to do something about this urgently'.*

PA13, PA14, PA19, PA22, PA23, PA25, PA29: *'We need more funding for wastewater treatment, sometimes we don't have materials for treatment and this is a serious problem towards delivering timeous service to the residents'.*

Research Question 4: Measures to enhance water and sanitation delivery at Emfuleni municipality

Participants= PA1-PA29

The participants confirmed collaboration with residents, awareness campaigns, promotion of emerging innovation, leak monitoring and detection, communication dynamics, maintenance of infrastructure, strategic management, and the implementation of service legislation.

### **Highlights from participants**

PA11, PA14, PA17, PA19, PA20, PA22, PA27: *We need to collaborate with the residents...they need to pay for the services consumed...they need to tell us when there are leakages...they need to report to us when people tamper with the water pipes we need effective collaboration with them.*

PA2, PA4, PA7, PA8, PA9, PA17, PA21, PA23: *Awareness campaigns are needed in this municipality to achieve success in service delivery. Members of the public will be enlightened on how to use water and issues surrounding sanitation through public awareness campaigns. We need to talk to the residents regularly, we need to teach them to report their matters before concluding that we don't care for them.*

PA1, PA6, PA8, PA9, PA11, PA12, PA14, PA16: *We need to upgrade the methods using to deliver our services and we need to ensure that all debts are recovered from the residents.*

*We should diversify the payment options for our services, we don't need to be owed; we need money for efficient service delivery.*

*PA12, PA17, PA18, PA19, PA21, PA22, PA24, PA28, PA29: To achieve equitable service delivery in our municipality, we need to ensure that we attend to all leakages as soon as possible. We need a sensory machine that should detect leakages rather than waiting for residents to report. This will enhance the quality of our service.*

*PA4, PA7, PA8, PA11, PA13, PA15, PA17, PA19, PA25, PA26: We need to communicate adequately...we need to create WhatsApp groups, we need to update our Websites and make it interactive, we need to educate residents using social media platforms, we need to be in touch with residents...this can be only achieved through the application of communication dynamics.*

*PA1, PA15, PA17, PA20, PA23, PA25, PA28, PA29: We need to maintain infrastructure for water and sanitation delivery...we don't have a good maintenance culture...we need to change this mentality...it is affecting us negatively. When our machines are old, we need to change it immediately, we don't need to wait till it is not functioning before we make plans for a replacement.*

*PA1, PA2, PA3, PA7, PA8, PA10, PA11, PA12, PA16, PA24: We need strategic leaders who are visionary in this municipality. Our leaders need to analyse the environment and formulate soluble policies to achieve our objectives. We need to do surveys here and determine the satisfaction of our residents...then we can know how best to deliver our services...we need strategic leaders.*

*PA3, PA5, PA8, PA11, PA13, PA 14, PA17, PA19, PA21, PA23, PA25, PA26, PA27, PA28: We need to enforce all the contents of our legislation and bye-laws. Residents do not take us seriously when we don't punish the offenders. Some people do not pay for services due to our inability to enforce laws guiding non-payment for services. We need to be strict to achieve equitable service delivery.*

**APPENDIX C**  
**Ethical clearance approval**



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Ethics Committee (EMS-REC)  
Tel: 018 299-1427  
Email: [Bennie.Linde@nwu.ac.za](mailto:Bennie.Linde@nwu.ac.za)

25 October 2019

Dr B le Roux  
*Per e-mail*  
Dear Dr le Roux,

**EMS-REC FEEDBACK: 25102019**  
**Student: Mathunzi TJ (23731079)(NWU-01344-19-A4)**  
**Applicant: Dr B le Roux - MBA**

Your ethics application on, *Water and sanitation service delivery at the Emfuleni Local Municipality*, that served on the EMS-REC meeting of 25 October 2019, refers.

**Outcome:**

Approved as a minimal risk study. A number NWU-01344-19-A4 is given for three years of ethics clearance.

Kind regards,

Prof Bennie Linde  
Chairperson: Economic and Management Sciences Research Ethics Committee (EMS-REC)  
Potchefstroom Campus

**APPENDIX D**  
**Approval to conduct research**

**MEMORANDUM**

To: Municipal Manager	From: Thokozile Mathunzi Act Assistant Manager Water
	Date: 21 January 2019
☎ (016) 986-8344 ☎ (016) 986-8330 e-mail: <a href="mailto:Thokozilem@Emfuleni.gov.za">Thokozilem@Emfuleni.gov.za</a>	Address: 3 Eastman Street Vanderbi@park NW7 1900
	Ref: JT Mathunzi

**REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN EMFULENI LOCAL MUNICIPALITY AND METSI A LEKOA; WATER AND SANITATION DEPARTMENTS**

My name is Josephina Thokozile Mathunzi (Student no. 23731079), and I'm a Senior Engineering Technician at Metsi A Lekoa in Emfuleni Local Municipality. I'm currently studying towards acquiring Master of Business Administration (MBA) in North West University: NWU School of Business and Governance. The research I wish to conduct for my Master of Business Administration involves Water and sanitation service delivery in Emfuleni Local Municipality. This project will be conducted under the supervision of Prof. Bertus Le Roux in North West University.

I am hereby seeking the Municipality's consent to approach participants for this research project and an approval to conduct the research using the Municipality.

I have provided you with a copy of the thesis proposal which includes a copy of Ethic informed consent form to be used in the research process.

Upon completion of the study, I undertake to provide the Emfuleni Local Municipality with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me on [079 503 6533, 016 986 8344 and [jmarhunzi@yahoo.com](mailto:jmarhunzi@yahoo.com) or [Thokozilem@emfuleni.gov.za](mailto:Thokozilem@emfuleni.gov.za)].

Regards,



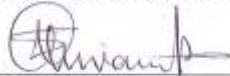
**Thokozile Mathunzi**  
Senior Engineering Technician: Water Department

Acknowledged/ Not Acknowledged



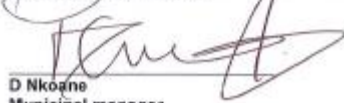
**C Netsshivhale**  
Operations Manager

Acknowledged/ Not Acknowledged



**S Shivambu**  
Acting Chief Director

Approved/ not approved



**D Nkoqne**  
Municipal manager