

Using water law enforcement to demonstrate the effectiveness of regulations for the protection of water resources

Farrel Smith

Mini thesis submitted in fulfilment of the requirements of the Master of Philosophy in Integrated Water Resource Management at University of Western Cape

Supervisor: Dr. Thokozani Kanyerere

Co-supervisor: Dr. Kevin Pietersen

Declaration

I declare that: "Using water law enforcement to demonstrate the effectiveness of regulations for the protection of water resources" is my own work, that it has not been submitted before for any degree or examination in any university, and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

Name: Farrel Smith (Student No. 2112218)

Date......



Acknowledgment

First, I would like to thank the almighty God for granting me the vision, strength, guidance and blessings to undertake this journey with success.

I would like to extend my heartfelt gratitude and appreciation to my Supervisor Dr Thokozani Kanyerere for his kindness, patience, tough love and not for giving up on me.

Dr Kevin Pietersen for all the assistance he has given during this course of this study.

Chantal Carnow for always vouching me and helping me with the administration of this study. Thanduxolo Stimela from the Department of Water and Sanitation. It is through his assistance and guidance I was able to add the essential information for this study. I would like to take this opportunity to thank everyone who extended a helping hand to complete this work.



Dedication

I would like to dedicate this work to my wife Aysha Ismail Smith and daughters Azra and Akilah Smith. I cannot express enough my heartfelt gratefulness and love for my wife, for her patience, encouragement and support and my beautiful daughters, for bringing joy to my life. I am deeply indebted to my parents for everything they have done for me and for their constant prayers, moral and emotional support.

A special thank you to Lewis Jonker for all his wisdom and knowledge. He was truly a great man. May God grant him a high place in heaven.



Disclaimer

The material provided in this study and any comments or information provided by the researcher is for educational purposes only. Nothing conveyed or provided constitute as legal advice. It is recommended that you seek legal advice on specific matters.



Abstract

The South African National Water Act attracted attention of the international water community as one of the most reformist pieces of water legislation in the world, and a major step forward in the transformation of the concept of integrated water resources management (IWRM) into legislation. However, 20 years later after the National Water Act was promulgated, implementation of the same act has been partially successful. In many aspects, the, implementation has been weak. The argument is that the water law enforcement is not been implemented to demonstrate the effectiveness of regulations for the protection of water resources. This means that the regulations to protect water resources exit but such regulations are not enforced and if they are enforced, they do not lead to protecting water resources. This study aims at demonstrating how the water law enforcement could be made effective in protecting water resources by exploring how the existing mechanisms are operationalized to ensure that the available water law result into protecting water resources.

The study assumed that understanding the factors that influence compliance and non-compliance of the regulatory framework for the protection of water resources remains critical. The study focuses on Cape Town as a case study to display the effectiveness of regulations for water resource protection. Results from the case study envisioned to form the basis for a countrywide survey or study on the same topic for a possible intervention thereafter.

WESTERN CAPE

Key Words: National Water Act, Constitution of South Africa, Compliance, Non-compliance, Offences, Remedies, Regulatory framework, Enforcement, Remedial action

List of Tables and Figures

Figure 1: Research framework for the study indicating key elements of the study	7
Figure 2:City of Cape Town, (City of Cape Town municipality, 2011)	8
Figure 3:Constantia, (City of Cape Town municipality, 2011)	9
Figure 4:Mfuleni, (City of Cape Town municipality, 2011)	.10
Figure 5: Philippi, (City of Cape Town municipality, 2011)	.12
Box 1: Principles of legality (Constitution, 1996 and Hall et al. 2013)	.20
Table 1: Enforcement options available within the NWA, (Department of Environmental Affairs, 2013)	.21
Table 2: Summary of results for the Case studies	.46
Table 3: The resultant effect of remedies provided by the enforcement mechanism for the National Water Act, (modified from Briad, 2017)	.47
UNIVERSITY of the	
Diagram 1:Enforcement process for the Green Scorpion, (Briad, 2014)	.49

Table of Contents

Declaration	ii
Acknowledgment	iii
Dedication	iv
Disclaimer	V
Abstract	vi
List of Tables and Figures	vii
ACRONYMS/ABBREVIATIONS	Xi
Chapter 1: General introduction	1
1.1 Study overview	1
1.2 Background to the study	1
1.3 Problem statement	4
1.4 Significance of the problem	
1.5 Study aim and objectives	5
1.6 Conceptualisation of the study	5
1.7 Research framework	
1.8 Description of study area	
1.8.1 Constantia	
1.8.2 Mfuleni	
1.8.3 Philippi	
1.9 Outline of the thesis report	12
2.1 Introduction WESTERN CAP	12
2.2 Previous studies on law enforcement for water resource pro	tection13
2.3 Determine the effectiveness of the enforcement mechanism the National Water Act	
2.3.1 Enforcement mechanisms	19
2.3.1. (a) Informal Mechanism	19
2.3.1. (b) Administrative Mechanism	19
2.3.1. (c) Criminal Mechanism	20
2.3.1. (d) Civil Mechanism	21
2.3.2 Summary	21
2.3.3 The enforcement process used of the National Water Act	22
2.3.4 Discussion on Promotion of Administrative Justice Act and of the National Water Act	the enforcement process

2.4 Assess effectiveness of the remedies provided by the enforcement mech offence is committed	
2.4.1 Remedies for offences in water law	
2.4.2 Factors influencing compliance and non-compliance in water law	
2.5 Theoretical framework	
2.6 Conceptual framework	
CHAPTER 3: RESEARCH METHODOLOGY	
3.1 Introduction	34
3.2 Research design	35
3.3 Methodology	36
3.3.1 Interview	37
3.3.2 Themes which were explored during the interview	37
3.3.3 Document analysis	37
3.4 Research methods	38
3.4.1 Data collection	
3.4.2 Data analysis	
3.5 Quality assurance	
3.6 Ethical consideration	
3.7 Study limitations	42
CHAPTER 4: RESULTS AND DISCUSSION	
4.1 Description of results	43
4.2 Descriptive and Interpretation of the results	
4.3 Comparative analysis and Evaluation of the results	
4.4 Implication of the results for practice and policy	
4.5 Summary Chapter	
Chapter 5: Conclusion and recommendation	
5.1 Introduction	
5.2 Summary of work	
5.3 Research question and thesis statement addressed	
5.4 Recommendation of the findings from the 2 objectives	
References	
APPENDICES	
APPENDIX A	
APPENDIX B	
Constantia Case 1	62

Constantia Case 2	68
APPENDIX D	70
Phillipi Case	70
APPENDIX E	73
Mfuleni Case	73
APPENDIX F	
Court outcomes achieved by the Department of Water & Sanitation	82



ACRONYMS/ABBREVIATIONS

NWA NATIONAL WATER ACT 36 OF 1998

NEMA NATIONAL ENVIRONMENTAL MANAGEMENT ACT 107 OF 1998

ECA ENVIRONMENTAL CONSERVATION ACT 73 OF 1989

WSA WATER SERVICE ACT 107 OF 1997

SA SOUTH AFRICA

INECE INTERNATIONAL NETWORK FOR ENVIRONMENTAL COMPLIANCE

& ENFORCEMENT

CME COMPLIANCE MONITORING AND ENFORCEMENT

UNRISD UNITED NATIONS RESEARCH INSTITUTE FOR SOCIAL

DEVELOPMENT

PAJA PROMOTION OF AMINISTRATIVE JUSTICE ACT 3 OF 2000

U. K UNITED KINGDOM

U.S. A UNITED STATES OF AMERICA

EPA ENVIRONMENTAL PROTECTION AGENCY

S24G

OECD ORGANISATION FOR ECONOMIC CO-OPERATION AND

DEVELOPMENT

CCT CITY OF CAPE TOWN ERSITY of the

DWS DEPARTMENT OF WATER AND SANITATION

DEA&DP DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT

AND PLANNING

Chapter 1: General introduction

1.1 Study overview

The Department of Water and Sanitation (DWS) is the custodian for water resources in South Africa and have a responsibility to ensure that South African citizens have equal and sustainable access to water and to the use of water resources. The Department of Water and Sanitations has a key responsibility for the prevention of pollution water resources, mandated to set and enforce norms and standards for drinking water quality and waste water quality. Muller's practical explanation of governmental functions and duties is that national government being DWS is responsible for the management of water in the rivers and that local government being municipalities is responsible for managing water in the pipe. The pollution of fresh water resources threatens citizens' equitable and sustainable access to water. In order to mitigate this problem, better enforcement of national standards will be required along with improved cooperative governance between national government and local government.

1.2 Background to the study

The lack of the enforcement of water pollution legislation is of the great threats to the water quality as well as the water supply for South Africa considering that South Africa is a water scarce country, (Nkosi and Odeleu, 2014). Malmqvist and Rundle, 2002 and Kaka, 2012, further states that the catchment destruction, increase in pollution as well as the increase in water consumption is a result of population growth. One way to ensure that what little water is available shall be used for the benefit of the people is to take a zero tolerance towards water pollution. Although there is clear regulation in terms of the use of water as per the National Water Act 1998 (NWA) as well as other relevant legislations such as the National Environmental Management Act (NEMA), Water Service Act (WSA). Hugo, 2014, mentioned the continuous non-compliance with legislation intended to protect water resources, and the poor enforcement of these laws mean that the constitutional rights are not being realised, and water resource governance is undermined. Even though the National Water Act includes provisions intended to make the criminal sanction more effective. Several commentators (Kidd, 2002) and (Pateron and Kotzé, 2010), argue that the poor compliance monitoring and enforcement of the water law is partly because the criminal sanctions imposed by criminal courts is so low that it does not act as a deterrent for non-compliance.

This study advocates the addition of an alternative mechanism as to current mechanisms and tools with the non-compliance imposed by the NWA. The objective of the improvement or enhancement of the current tool is to help improve the protection and conversation of SA's water resource.

Although South Africa have adequate water legislations for the protections and conservation of water resource it is a common criticism that the enforcement of the prescribed legislation for water resources and the environmental is not enforced effectively. Kidd, (2012), produced a paper on the 'Alternatives to the criminal sanctions in the enforcement of environmental law", in his paper he highlights that the criminal sanction is the predominant enforcement mechanisms for environmental legislation. He then goes on further to explain if the strengths and weaknesses of the criminal sanction is considered. It would not be difficult to escape the conclusion that criminal law should not be the default mechanisms for environmental infringements and that alternatives must be seek out and that the criminal sanction must be reserved for serious environmental crime for example the illegal trade in endangered species.

To understand the need to address the effectiveness of the enforcement mechanisms used for water resources protection this study will illustrate current tools available for the protection of water resources in South Africa.

There are various enforcement and compliance tools mechanisms in place to ensure compliance with water law. These include command and control mechanisms such as criminal sanctions, administrative measure (pre-directives and directive notices), alternative mechanisms, civil-based measures, economic instruments, agreement, conflict management and dispute settlement, (Kaka, 2012).

The intention of the study is to examine the effective use of compliance and enforcement tools of the NWA. The study has two hypothesises. The first, the study claims that the criminal sanctions are the best mechanisms for enforcement for water protection. If not what alternative mechanism exist for enforcement. The second claim of the study is the use of the compliance and enforcement tools do not exist or are poorly understood for the protection of water resources.

In a report by the United Nations Environmental Programme: Environmental Rule of Law,2019, acknowledges that since the Rio Earth Summit of 1992 many countries made a concerted effort to enact environmental laws, establish environmental ministries and agencies and to enshrine environmental rights and protection in their national constitutions. The report

further states that by the 2012 United Nations Conference on Sustainable Development the focus had implementation plans of environmental laws which made progress declined. The report also establishes that too often the implementation and enforcement of environmental laws and regulations fail to address environmental challenges. This is either due to the lack of clear standards within the regulations or policies or the specific environmental agencies are underfunded and in some cases, the law is tailored to national or local context.

The situation that exist is not unique to the South Africa environment. The protection of water resources is a global problem. This is confirmed by the existence of organization such the Internal Network for Environmental Compliance and Enforcement (INECE). The goal of the organizations is to improve compliance and enforcement through better co-operation. Their goals also include the strengthening capacity throughout the regulatory cycle to implement and secure compliance with environmental requirement. It must be noted that non-compliance with environmental law is not limited to a specific economic group or a specific country. In a developing country like Pakistan, the same problem that South Africa is experiencing with protection and conservation also exist. Jabeen et al., (2015) also indicated that Pakistan have problems with the protection of its country water resources. This is as of a result of out-dated legislation that exist in the country as well as the very ineffective manner in which some water laws are enforced due to a lack of political will as well as the uncertainty of jurisdictions of governmental functions which is in the country. This all leads to the poor or ineffective protection of the country's water resources.

Measures for facilitating water compliance and enforcement consist of two measures firstly administrative measure and secondly criminal measure. The administrative measure facilitate compliance through the issuing of directives, compliance notices that may include provisions empowering the withdrawal of authorisation. The criminal measures seek to compel compliance through civil and criminal liability this is as a result of non-compliance with the administrative measure.

The usual mode of enforcement for regulatory provision, including water legislation has been and is the use of the so-called "command and control" mechanism. This mechanism follows the John Austin theory of legal positivism, as series of command backed up by threats.

1.3 Problem statement

The Department of Water and Sanitation in its capacity as the custodian of water resources is mandated by the National Water Act 36 of 1998 to ensure that water resources are protected, used, developed, conserved, managed and control to prevent pollution and their degradation. The National Water Act makes pollution of water resources a punishable offence and any person who contravenes the provisions of section 151 (1) of the Act guilty a criminal offence. To enforce compliance, the NWA empowers the DWS to issue directives in terms of section 19, 20, 53 and 118 of the NWA and to approach the courts should such directives and other provisions in the Act not be complied with. Neither directives nor court action have proved to be effective mechanisms for the protection of water resources. Enforcement is made more difficult because of the burden of proof for the legal system.

1.4 Significance of the problem

The protection and sustainable use of water resources is critical not only for basic human needs however also for securing sufficient water for present and future generation. Water is used for domestic; environmental; industrial; recreational and agriculture which necessitate it to be of good of quality. The biggest water user is the agriculture sector which is subjected to stringent conditions in terms of water use. Government has the responsibility to provide an assurance of security and quality of water supply for the benefit of the country's health, economic and food production needs. The challenge of non-compliance with NWA requires urgent attention.

The situation that exist is not unique to the South Africa environment. The protection of water resources is a global problem. This is confirmed by the existence of organization such the Internal Network for Environmental Compliance and Enforcement (INECE). The goal of the organizations is to improve compliance and enforcement through better co-operation. Their goals also include the strengthening capacity throughout the regulatory cycle to implement and secure compliance with environmental requirement. It must be noted that non-compliance with environmental law is not limited to a specific economic group or a specific country. In a developing country like Pakistan, the same problem that South Africa is experiencing with protection and conservation also exist. Jabeen et al., (2015) also indicated that Pakistan have problems with the protection of its country water resources. This is as of a result of out- dated legislation that exist in the country as well as the very ineffective manner in which some water laws are enforced due to a lack of political will as well as the uncertainty of jurisdictions of

governmental functions which is in the country. This all leads to the poor or ineffective protection of the country's water resources.

1.5 Study aim and objectives

The main aim of the study is to evaluate the effectiveness of the water legal system provided for the protection of water resources.

In attempting to achieve the aim of the study the following questions needs to be addressed:

- 1. What enforcement mechanism exist within the National Water Act?
- 2. How is the National Water Act enforced?
- 3. What results does the enforcement of the National Water Act produce?

If the remedies provided by the enforcement mechanism of the National Water Act is effective, then water resources can be protected more effectively as envisioned by the Constitution and the NWA.

The objectives of this study are as follow:

- 1. Determine effectiveness of the enforcement mechanisms used for the enforcement of the National Water Act for water resource protection.
- 2. Assess effectiveness of the remedies provided by the enforcement mechanisms when an offence is committed.

1.6 Conceptualisation of the study

Human behaviour within societies are shaped through various tools, one such tool is legislation. Legislation regulates human behaviour either by commending specific behaviour or by encouraging abstention from certain behaviours.

Any dialogue about how to approach regulatory effectiveness have to begin by clarifying the terms and concept of regulation, enforcement and effectiveness. The word regulation itself can mean many things. At its most basic level, regulation is treated as synonymous with law. For this study, regulations are rules or norms adopted by government and backed up by some threat of consequences, usually negative ones in the form of penalties, (Coglianese, 2012). Enforcement for the purpose of this study, is defined as meaning, the range of procedures and actions employed by a State, its competent authorities and agencies to ensure that organisations or persons, potentially failing to comply with water law or regulations, can be brought or returned into compliance and or punished through civil, administrative or criminal action. Cambridge dictionary defines effectives as the ability to be successful and produce the intended results. For the purpose of this study measuring the effectiveness of regulation for water

resource protection means measuring the extent to the regulation for water has solved the problem they were designed to address.

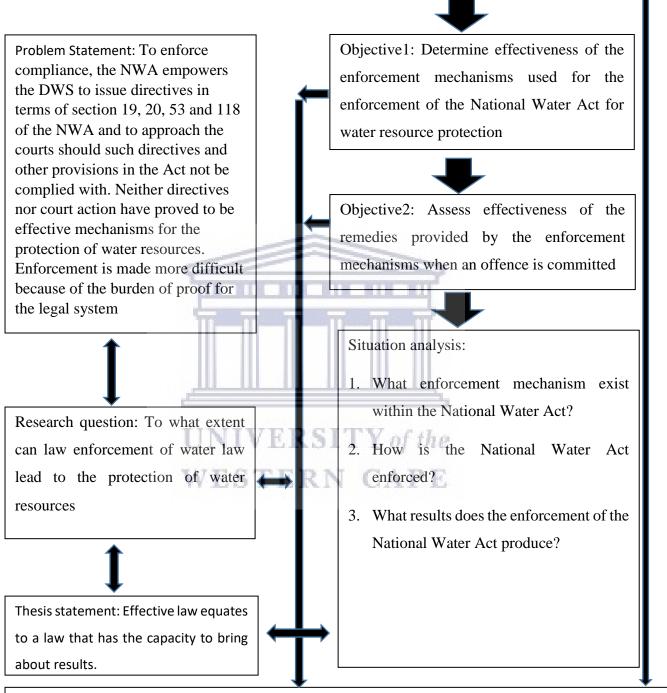
Effectiveness has become a fundamental part of the values and principles that describe legislative quality. Effectiveness reflects the relationship between the purpose and the effects of legislation and expresses the extent to which it is capable of guiding the attitudes and behaviours of target populations to those prescribed by the legislator. In simple terms, effectiveness articulates the range to which a law can do the job it is anticipated to do and is considered the key expression of legislative quality, (Mousmouti, 2012).

One tool assist in the effectiveness of legislation is the effectiveness test. A logical exercise that examines the unique features of existing legislation by considering how the purpose, the structure, the content, and the results of the existing legislation are aligned and consistent.

(Mousmoeti, 2012), describes the effectiveness test is a tool that allows for the identification of the direct relation between the purpose of the legislation, the appropriateness of the means used and the results and can be used throughout the life-cycle of legislation. For legislation in force it can examine the fundamental relationships between the law and its effects, the extent to which the legislation is working and what needs to change. In other words, the effectiveness test allows an identification of the weaknesses of legislation and can prevent regulatory failures. It allows identification at an early stage of the ineffectiveness of content and design (whether the rules used are inappropriate to address the problem tackled or are too broad or too narrow in relation to the stated purpose), the ineffectiveness of enforcement (whether the enforcement strategy or mechanism is inappropriate or implementation is inadequate). Through the effectiveness test, weaknesses can be identified and addressed.

1.7 Research framework

Using water law enforcement to demonstrate the effectiveness of regulation for the protection of water resources.



Aim: To evaluate the effectiveness of the water legal system provided for the protection of water resources.

Figure 1: Research framework for the study indicating key elements of the study

1.8 Description of study area

This study will present four cases studies which occurred in the Constantia, Mfuleni and Philippi districts located within the City of Cape Town (Figure 2).

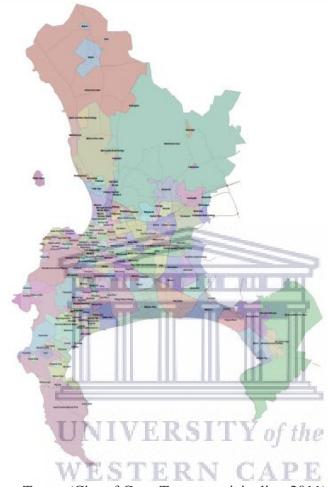


Figure 2:City of Cape Town, (City of Cape Town municipality, 2011)

1.8.1 Constantia

Constantia Valley is a district within the City of Cape Town Municipality that covers 25km² in area and is situated approximately 13km south of the urban centre (Figure 3). The 2011 census found that Constantia had a population of 12454, of which 36.5% was white, 5.4% was black and 3.9% was coloured. The Constantia Valley forms part of a unique environment that is a global conservation priority (Myers et al., 2000). It is situated in the Cape Floristic Region (CFR) an area of exceptionally high biodiversity (Cowling et al., 1996). Myers et al. (2000) identified the CFR as a global biodiversity hotspot for conservation. The CFR is highly

threatened from agriculture, urbanisation and alien invasive plants (Cowling et al., 1996; De Villiers and Hill, 2008; Rebelo et al., 2011).

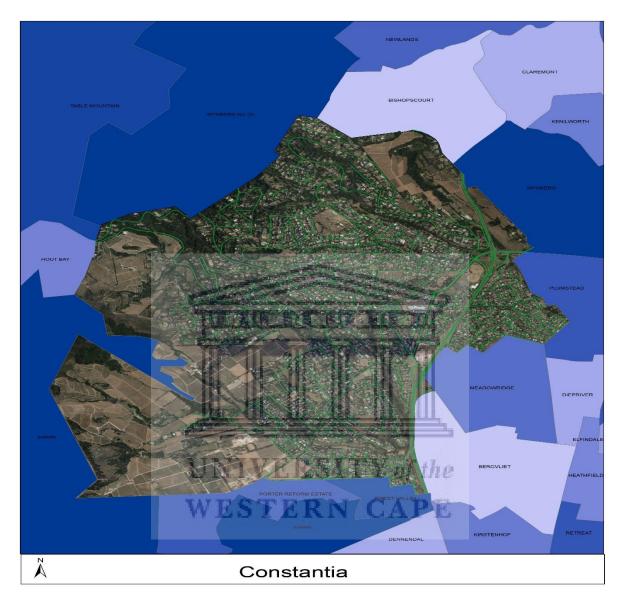


Figure 3:Constantia, (City of Cape Town municipality, 2011)

1.8.2 Mfuleni

Mfuleni is a suburb of Blue Downs district, close to the sprawling township of Khayelitsha. Mfuleni covers an area of 391 hectares, 8km from Blackheath, 24.5km from Stellenbosch, 10km from Kuilsriver, 30km from Cape Town and 10 km from the Cape International Airport (Figure 4). It is situated on the Cape Flats. The area consists of many dunes covered with bush. Originally seasonal (Shand and Nicks, 1999), the Kuils River is now perennial due to urban runoff and outflows from WWTW. Around Mfuleni there are both seasonal and permanent wetlands covering some 311ha. Most land in Mfuleni is state-owned or previously belonged to

the South African Development Trust (Dixon and Ramutsindela, 2006). Past studies list a number of resources harvested from open areas in the City of Cape Town including: medicinal plants; food plants such as *Aponogeton distachyos*; animals; arum lilies (*Zantedeschia aethiopica*) and *Phragmites* reeds (Turpie *et al.*, 2001). Shand and Nicks (1999) estimated that 62 plant species are harvested from the wetlands of the Kuils River. In 2011, Mfuleni had a population of about 64269, with 57% being unemployed. After floods in 2001, over 4 000 people were resettled on open areas in Mfuleni (Dixon and Ramutsindela, 2006). Informal settlement dwellers are the main users of the wetland areas.

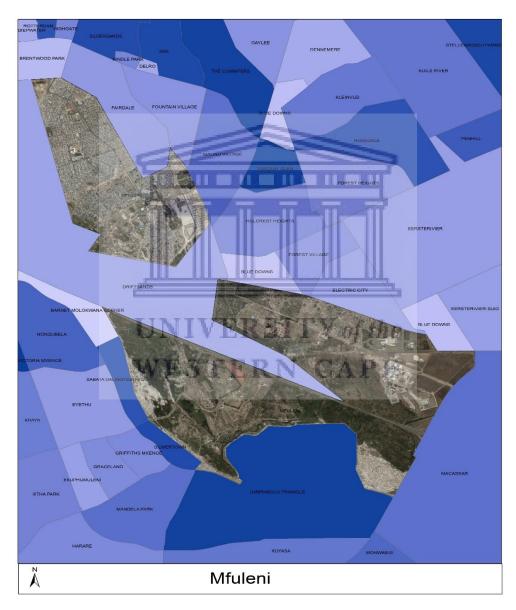


Figure 4:Mfuleni, (City of Cape Town municipality, 2011)

1.8.3 Philippi

The Philippi area is situated on the sandy Cape Flats, about 14 km from Cape Town, Western Cape (Figure 5). It lies within the quaternary catchment area, with a topography typical of coastal plains and dune fields (DWAF, 2007). The Philippi area is still predominantly used for vegetable farming, although other forms of farming include shrub and flower farming as well as poultry, pig and cattle farming. Although the area receives a significant amount of rainfall during the winter season, groundwater is often used as the main water source for irrigating the crops is pumped and stored into irrigation ponds and later the stored water is re-pumped to irrigate the sub-adjacent cropping areas. These irrigation ponds act as the reservoirs and contain water from boreholes, rainfall and, sometimes, irrigation return flow.

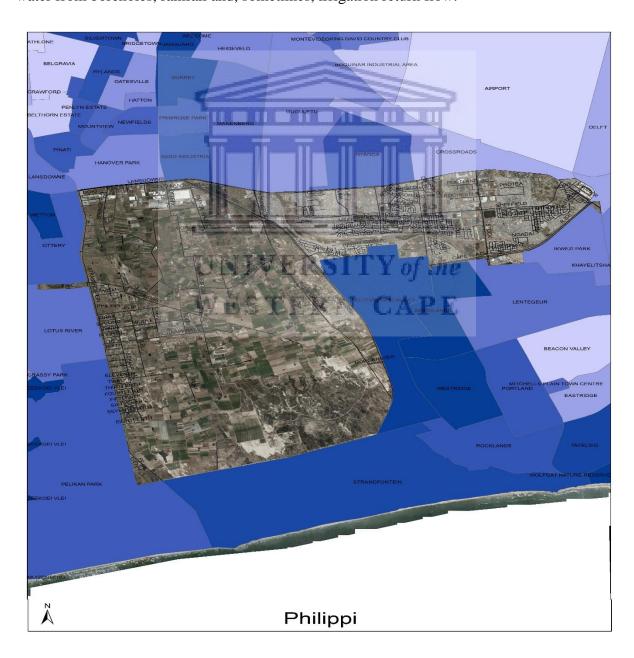


Figure 5: Philippi, (City of Cape Town municipality, 2011)

1.9 Outline of the thesis report

The composition of study is made of five chapters comprising different headings.

Chapter 1: Introduction; this chapter provides a reflection on the background of the study. The problem statement, aims and objectives of the study, significance of the study.

Chapter 2: Literature Review; this chapter presents an analysis of findings on the enforcement mechanisms used for water law as well as the remedies which is provided by the enforcement mechanism from a global perspective and narrowed to the South African situation. This review will include relevant research findings from studies on water enforcement. The chapter explores what is already in the field and tries to identify what knowledge gap this research seeks to fill.

Chapter 3: Methodology; this chapter covers the methods used in collecting data and analysis of the research instruments used to gather the data.

Chapter 4: Results and Discussion; in this chapter results of the study are presented, discussed and analysed.

Chapter 5: Conclusions and Recommendations, this chapter focuses on conclusions which are drawn based on the findings of the research and recommendations also drawn from best practices.

UNIVERSITY of the Chapter 2: Literature review WESTERN CAPE

2.1 Introduction

In chapter one, an introduction to this study was presented by discussing the background to the study, stating the research problem, outlining the research questions and proving the overall aim and objectives of the study. This chapter presents a literature review of the relevant research and enforcement theories for water resources protection.

It is written in three sections with subsections within each section. First, an analysis of the previous studies conducted on law enforcement for water resource protection. Second, an investigation on the available enforcement mechanisms and to determine which enforcement mechanism is used for the National Water Act. Third, determine the remedies that each of enforcement mechanisms provide when an offence is committed in terms of the water law.

Fourth, determine the factors that influence compliance and non-compliance with water law. Fifth, the theoretical framework for the study. Sixth, the conceptual framework for the study. Seventh, the methodological framework for this section. Lastly, the layout of the research framework for the study.

2.2 Previous studies on law enforcement for water resource protection

When analysing the current legislation available for the protection and conservation of water resources within South Africa, none of the legislation provide a clear definition of compliance as well as for enforcement. The obedience to a request or command has been defined as compliance. Craige et al, 2010, defines compliance in a legal and regulatory policy "an ideal situation in which all members of a legal community adhere to the legal standards and requirements applicable to that community's activities". Without compliance governance and regulation will be meaningless. Zaelke et al., (2005) and Schreiner et al., (2011), describes compliance as "an indivisible part of the rule of law". Compliance follow two theories namely the rationalist theory or the normative theory as stated by Zaelke et al., (2005) & Schreiner et al., (2011). When following the rationalist theory for compliance the regulated community is regarded as the rational actor that acts to maximise their economic self-interest, in that community the law is merely a means of deterrence or hindrance. If a member of the regulated community considers to break the law, the member decision is influence by the possibility of being caught coupled with the risk of severed punishment. Thus if the benefit outweighs the risk, the risk will be taken as the benefit will be of maximum interest.

Unlike the rationalist theory for compliance, the normative theory for compliance centres more on the logic of appropriateness. The normative theory for compliance is based on the opinion that the regulated community will be in a state of compliance. This is the regulated community will try and achieve compliance at any given time, however there might be a range of factors which will influence the non-compliance in the regulated community if there is lack of incentives, or a lack of awareness or a shortage of resources. In a normative theory the regulated community, compliance is considered as a measure to prevent harm instead of punishing non-compliance. In this regulated community compliance is achieve through a conciliatory style which is dependent on bargaining to attain conformity as oppose to the sanctioning strategies with regard to punishment or violating the law. The normative theory provides assistance and facilitating compliance than punishment in the event of non-compliance.

No clear definition for enforcement also exist in the current legislation for the protection for water resource in South Africa. Unlike compliance, enforcement (Graige et al., 2010, INECE, 2005) describes it as the "actions that government and others take to achieve compliance within a regulated community and or to correct or halt situations where such compliance is not present. Paterson & Kotzé, (2010), describes the actions taken in response to detected non-compliance, including the violator being punished and or actions taken to ensure that the harm to the water resources is halted and or rehabilitated forms part of enforcement within the regulatory cycle, further to this they also noted that enforcement is a key element of the regulated cycle as in accordance with the rationalist theory discussed above. Compliance and enforcement mechanisms that promotes or ensure compliance with law, generally fall into two broad categories; namely "command-and-control" mechanisms and "alternative compliance" mechanisms.

Systems of strict monitoring by authorities with regard to whether the law is being followed and where offenders are prosecuted using criminal law are known as the "command and control" mechanism, (Paterson & Kotzé, 2010, Kaka, 2012). Command and control mechanism include criminal, administrative and civil measures. Paterson and Kotze go on further to mention that traditionally the command and control approaches is used of for achieving compliance involves two processes. The first being the prescription of legal requirement and obligations (the command) and the second processes being to compel compliance with the prescribed legal requirements and obligation (the command) through the use of enforcement measures where non-compliance is detected (control). What is noteworthy of the command and control approach is that is fairly simple to understand in a regulated community and for authorities to administer the mechanisms, however its effectiveness suffers from important pitfalls and short comings, this is as a result of the mechanism being resource-intensive, time consuming and expensive. It is also rigid and do not allow authorities to exercise discretion when needed (du Plessis and Nel, 2011 and September 2012).

Punitive sanctions are as of a result of conviction in a criminal court following investigation and prosecution in South Africa. In terms National Environmental Management Act, the maximum penalty for an environmental offence is 5 years' imprisonment or R5 million rand for a first offence or 10 years' imprisonment or R10 million for a second offence. However, in the National Water Act there is no maximum penalty in terms of punitive value apart from a fine maybe issued or a 5-year imprisonment period for the first offence or both.

The sanctions contained in the water law are often insufficient to adequately penalise the offender. This is due to the penalties not being very specific related to the nature of the offence or the gravity of contravention is not listed in the water law. Craige et al. (2009) and September, (2012), allude that there is correlation between environmental and commercial crimes in that substantial financial gains can be secured through the contravention of environmental laws (e.g. the sale of abalone or illegal dumping or the dredging of a wetland).

Although criminal measures are inherently ill-equipped to address water resources harm, the criminal court may impose additional penalties under section 153 of the NWA, to award damages for the loss or harm suffered by the person referred to section 152 of the NWA. The court may also order the accused to pay for the cost of any remedial measures implemented or to be implemented further to this. The court may also order the remedial measures to be implemented or be undertaken either by the accused or the relevant water management institution. Winstansley, (2009) and September, (2012), mentions that while criminal measures are primarily aimed at punishing offenders for causing harm to the environmental or disregarding the law, administrative measures focus on ceasing illegal or environmentally harmful activities by ensuring compliance and or imposing measure to prevent or remediate or to mitigate harmful activities.

The most prevalent form of administrative measures used in South Africa are compliance notices, which originates from the Public Administrative Justice Act (PAJA). Environmental compliance notices or directives issued in terms of Section 31L of National Environmental Management Act, Section 19 of National Water Act or Section 31A of Environmental Conservation Act. Notices or directives issued in response to non-compliance activity, which instruct the possible offender to take corrective actions, failing which the offender, may be guilty of a criminal offence (Craigie et al, 2009).

The failure to comply with an administrative notice or directive within the specified timeframe can result in legal action, requesting the court to instruct the offender to undertake work set out in the notice or directive as well as recovering associated costs or the withdrawal of authorisation. Craigie et al., 2009 states that administrative measures can be used in conjunction with criminal prosecution in order to ensure compliance take place immediately or after or simultaneously with the finalisation of a criminal case. Unlike criminal measure, administrative measures can achieve enforcement in a far more expedient and cost-effective

way, mainly because administrative measures is administered by the competent authorities and do not need the onerous proof required for criminal proceedings.

2.3 Determine the effectiveness of the enforcement mechanism used for the enforcement of the National Water Act

The Promotion of Administrative Justice Act were passed by parliament to give effect the constitutional rights as laid out in Section 33 of the Constitution. In terms of this right, administrators (government) is required to follow a fair procedure when making decisions. This right also requires administrators to provide adequate reason when asked to do so for the decisions that the administrator have taken. Furthermore, this right places an obligation on the administrator to inform people about their rights to review or appeal decisions made by the administrator. This right as laid out in the constitution also give the public the right to challenge administrative decisions in court. Because administrators must obey the law, it is possible to take the government to court if the government has broken the law. The power that courts have to decide whether a government decision is allowed by the law is called a judicial review. This means that administrators must first look to PAJA to find out their general legal obligation in relation to the powers that they have by law.

The Promotion of Administrative Justice Act, 2000 (Act No. 3 of 2000) gives effect to the right to administrative action that is lawful, reasonable and procedurally fair as well as to the right to written reasons for an administrative action. The most important way in which to enforce the right to just administrative action is by judicial review. This means that any person who is aggrieved with an administrative decision can challenge the decision in court after an internal appeal have been decided.

If the court determines that the decision is unlawful, unreasonable or procedurally unfair the court can make a number of possible orders to rectify the situation. These may include however is not limited to the following:

- 1. The court may order that the administrator's decision is invalid or
- 2. Order the administrator to reconsider the decision or
- 3. The court may replace the decision with the court's own decision or
- 4. Order the administrator to pay damages to the affected person.

A judgement made on the 31 January 2018 by the High court of South Africa (Gauteng division) case number 44773/2016, the matter between Interwaste (Pty) (applicant) v Petlane N.O, Badenhorst N.O., MEC for Economic, Environment, Agriculture and Rural Development (Respondents). The judgement reads as follows: "Interwaste was issued a Waste Management Licence to construct and operate the waste disposal site in Olifantsfontein on 25 November 2011, and an addendum to this WML was issued on 12 December 2012. The WML contained a provision under the heading "Conditions" that stated as follow: "This WML must be renewed within a period of 4 (four) years from date of issue". No renewal was made. An Environmental Management Inspector (EMI) issued the following to Interwaste:

- A letter indicating that the WML expired on 24 November 2015 and calling on Interwaste to submit proof of its WML renewal prior to 24 November 2015, to allow Interwaste to continue with its operations. Interwaste responded by indicating that the WML should only be renewed on 11 December 2016, being 4 years after the addendum to the WML was issued.
- On 18 January 2016 a Pre-Compliance Notice was issued, stating that the competent authority has reason to believe that Interwaste is in non-compliance with some conditions of the WML, specifically relating to the non-renewal of the WML within 4 years.
- On 24 March 2016 a Compliance Notice was issued to Interwaste.

Interwaste objected to the compliance notice and requested the MEC for Economic, Environment, Agriculture and Rural Development to suspend the Compliance Notice pending the determination of the objection. The objection was rejected and the Compliance Notice upheld. Interwaste then approached the Court to have the Compliance Notice reviewed and set aside and to have the rejection of the objection also reviewed and set aside, substituting the MEC's decision with one cancelling the Compliance Notice. Alternatively, Interwaste requested that the matter be remitted to the Gauteng Department of Agriculture and Rural Development for a fresh decision by another official.

The Court set aside the Compliance Notice and the decision of the MEC and referred the WML back to the Licensing Authority to ensure compliance with section 51 of the National Environmental Management: Waste Act 59 of 2008 (NEMWA). Important findings include:

1. Compliance notice:

- The provision "This WML must be renewed within a period of 4 (four) years from date of issue" is not a condition or an obligation it merely offers Interwaste the right to apply for a renewal of its WML. It's inaccurate then to state that Interwaste has contravened a condition of the WML.
- This "contravention" can also not be rectified due to the fact that the four-year period has already expired. An expired provision cannot be enforced.
- Section 56 of NEMWA gives a Licensing Authority the authority to suspend or revoke a WML if the Licensing Authority is of the opinion that a contravention of a NEMWA provision or a condition of the WML has occurred. Therefore, provision has been made for a different entity to order the complete cessation of operations of a WML holder. It is not a power that can be exercised through a Compliance Notice. If the EMI suspected a contravention of NEMWA rather than the WML, the process of chapter 5 of NEMWA should've been followed.

2. Waste Management Licence:

The WML has to specify the validity period thereof and the period within which any renewal must be applied for (section 51(1) of NEMWA). This WML does not specify the validity period or the period within which the renewal must be applied for."

A wider context of compliance must be kept in mind when taking enforcement. While a particular state of adherence to a set of legal standards or requirements are referred to as compliance. Enforcement refers to the actions taken in response to non-compliance, and includes criminal prosecution and administrative action. Enforcement action or the consequences of non-compliance must be firm but fair, proportionate, consistent and transparent. This is known as the principles of enforcement.

To secure compliance with a regulatory system or to ensure that preventative or remedial action is taken to protect the water resources emanated the purpose for enforcement action.

The enforcement action achieves the protection of water resource goal by providing non-compliance with specific consequences, be it punishment in the form of a fine or imprisonment or directives, notices or court orders to ensure compliance and remediation at the cost of the transgress. Enforcement is therefore one of the tools used in achieving compliance and ultimately in protecting the water resources.

2.3.1 Enforcement mechanisms

The law makes it possible to choose different types of enforcement action in response to non-compliance with the National Water Act, however it is important that the most appropriate action is followed, which sometimes may be a combination of different enforcement actions. In deciding the most appropriate enforcement action or the combination of enforcement actions it is important to know what options are available and whether specific options are legally permissible given the case under consideration.

2.3.1. (a) Informal Mechanism

Informal enforcement mechanisms are, where a particular action has the potential to cause no or minor harm to the water resource; and the potential transgressor did not act intentionally or recklessly; and the transgressor has clearly demonstrated their desire, intention and capability to comply then an informal enforcement action might be appropriate or productive. The transgressor might comply with a written warning. The added advantage of the written warning should the transgressor persist in their non-compliance conduct the transgressor will not able to claim ignorance of the law. Formal measure will be used should the transgressor fail to comply or inadequately comply with the informal enforcement mechanism. Therefore, where the informal mechanism is utilised, care must be taken not to prejudice.

2.3.1. (b) Administrative Mechanism ERSITY of the

The aim of administrative enforcement measures is to bring a transgressor into compliance with the National Water Act by directing the transgressor to cease the illegal or damaging activity by undertaking rehabilitation/remedial action or steps to address the damage or harm caused as a result of the non-compliance (Snijman et al., 2013). Generally administrative enforcement mechanism includes the issuing of directives and notices, administrative enforcement mechanism can be used to amend or to withdraw a permit/license or authorisation. Two categories exist for the issuing of notices. The first category is to address urgent situations and the second category is not urgent. In an urgent situation the issuing of a final administrative enforcement notices falls within the definition of an administrative action in terms of Promotion of Administrative Justice Act, as this type enforcement have direct legal effect that maybe detrimental to the rights of the receipt. In the course of normal events (category two/administrative action) the recipient of the directive or notices is afforded the opportunity to make representation on the intended administrative action before it is finally issued. This form

of administrative action normally takes the form of a pre-directive or pre-notice also referred to as a notice of intention to issue a directive, which informs the recipient of the intended administrative action. In serious situation where imminent harm to the water resources is pending and requires urgent action, the final directive or notice can be issued and an opportunity afforded to the recipient to make representation will take place at a later stage.

2.3.1. (c) Criminal Mechanism

Certain basic requirements must be met before determining whether criminal action is desirable. These requirements include, however not limited to if the particular action or activity by the transgressor constitute an offence as per the principles of legality (see box below) and there must be an identifiable accused and lastly there must be sufficient, admissible and reliable evidence available to prove the charges against the accused create a realistic prospect of conviction.

Box 1: Principles of legality (Constitution, 1996 and Hall et al. 2013)

The Principles of legality

The conduct that a person is accused of must be recognized by (common law or legislation) as a crime.

The principal of legality requires that a crime should be clearly defined in explicit terms and express words, and that punishment is prescribed for non-compliance, thus prohibited conduct must therefore be described in clear and unambiguous language.

Because of the above principle no person can be accused. Tried or convicted based on conduct that did not constitute a criminal offence under the law at the time of its commission. From this, result the prohibition of retroactive criminal legislation.

Another consequence of the principles of legality is that a heavier penalty than the one applicable at the time of the commission of the offence may not be imposed.

If the above-mentioned requirements are available, criminal enforcement action should be taken in circumstances where:

- the action was intentional or grossly negligent, irrespective of whether the threat or damage or potential damage to the water resource is or was negligible;
- the offence caused, or had the potential to cause serious environmental harm;
- the offence is of an organised nature;

- the offence is linked to other serious offences such as fraud, falsification or corruption,
- the carrying out of any activity was intentionally done without the necessary licenses, permits or authorisations and no reasonable steps were taken to obtain such authorisation;
- there is failure to comply with the conditions of a license, permit or authorisation;
- there is failure to comply with an administrative directive or notice (where such conduct is criminalised);
- there is persistent non-compliance (such as failure to comply with standards which has been pointed out previously to the transgressor,
- there is failure to comply with section !9 of the NWA.

All cases where a criminal docket has been open must be referred to the National Prosecution Department for a decision to prosecute or not, (Hall et al. 2013).

2.3.1. (d) Civil Mechanism

To either stop a transgressor from doing something or to compel a transgressor do something an application must be lodge with the High Court of South for a prohibitive or mandatory interdicts. It must be noted that the legal cost involve is very high and that this tools are only available in limited circumstances, however may be appropriate in some urgent matters. In urgent matter it is best to apply for a temporary interdict pending the outcome of enforcement actions in which the rights of the parties are to be determined, this can be done without giving the respondent notice, Section 155 of NWA,1998,

2.3.2 Summary

In terms of the NWA there a range of enforcement options. These options are summarised in the table below with each objective for the specific option available.

Table 1: Enforcement options available within the NWA, (Department of Environmental Affairs, 2013)

	INFORMAL	FORMAL MEASURES		
	MEASURES			
Type of Enforcement	Informal mechanisms	Administrative	Criminal	Civil mechanisms
		mechanisms	Mechanisms	
Objective	This mechanism is	This mechanism is	To punish the	Similar to
	used to provide a	used to bring a	transgressor and to	administrative
	transgressor an	transgressor into	deter the transgressor	enforcement, but
	opportunity to come	compliance or to halt	and other would be	there is a clear

	into compliance	non-compliance by	offenders from	infringement of legal
	without the use of a	either directing the	committing a similar	rights and all other
	legislative regulatory	transgressor to cease	crime.	legal remedies have
	mechanism.	the illegal activity or		failed.
		by stopping the		
		damaging activity		
		and to rehabilitate or		
		take steps to address		
		the damage or harm		
		caused to the water		
		resource.		
Examples	Verbal warning,	Directives from the	Criminal trial in	The below is
	• Written	NWA:	terms of section	achieved though
	warning, issuing	• S19	151 (1)(d) and	section 155 of the
	of inspection	• S20	section 151 (1)	NWA:
	report with an	• S53	(2) of the NWA.	Interdict
	opportunity to	• S118	S105 Plea and	(mandatory/proh
	respond,		Sentence	ibitory),
	Imposition of		agreement	• Mandamus,
	new or different			Declaratory
	permit		11-11	order.
	conditions.			

2.3.3 The enforcement process used of the National Water Act

The enforcement process for the NWA follows two routes, the first is an administrative route and the second being a criminal route. The enforcement process commences with a complaint from the public about a possible contravention. The official will then do a site inspection either to monitor compliance of a water use license, or as a result of a complaint received from the public. Should a contravention be identified, the routine site inspection moves up to an investigation. If there is a contravention, then the official will issue a written warning either in terms if S 19, S 20, S53 and S 118 of the NWA, which will be in the form of a notice of intention to issue a directive or pre- directive or pre-compliance notice as per the PAJA notifying the transgressor of the Competent Authority intention to issue an administrative notice which can be a Directive or Compliance Notice should transgressor fail to comply with the requirements as laid out in the notice of intention to issue a notice.

This warning notice also includes a set of instructions or commands to remedy the contravention. These commands might include the request for specialist studies and

a requirement to submit a restoration plan. These requirements are limited to the official's observations and capability to observe and deduce impacts as a result of the contravention.

These commands do not include any guidance as to the intentions of the restoration plan or remedial activities, or indicators to measure progress or achievement of the restoration plan. If specialist studies are requested, the department specialists can review these if they are available. Upon acceptance of these studies and restoration plan, the official will then issue the directive or compliance notice instructing the transgressor to carry out implementation of the restoration plan.

Criminal and civil prosecution (also known as the control mechanisms) may and in most cases be carried out concurrently to the administrative notices, or as a result of non-compliance with the administrative notices. However, it must be noted although there is different legislation for the protection of water resources in South Africa it is not often and mostly not enforce in a coordinated manner as each department has a clear mandate which differs from one authority to the next. In compliance with law, the instructions of the directive or compliance notice must be the same as the instructions in the warning pre-notice. Should new information come to light, or any necessary deviations be required, then the existing warning notice must be withdrawn in writing and a new warning notice with those additional requirements or deviations must be issued. Furthermore, once a contravention has been addressed, the same contravention may not be addressed again, in other words a new offence with new evidence is required. This implies that there is only one opportunity to ensure that the appropriate rehabilitation is identified and carried out.

In many cases, the instructions for rehabilitation are commonly issued prior to the detailed studies, resulting in substantive science only being introduced into the enforcement process by the specialist studies after the warning notice is issued. Where in-house specialists are utilised, they are usually brought into the process too late, or only asked to review rehabilitation plans once the warning notice has already been issued.

2.3.4 Discussion on Promotion of Administrative Justice Act and the enforcement process of the National Water Act

Administrative law and administrative justice has become increasing import in the realm of water law, in this regard the effectiveness of water law not so much relates to the content

thereof, however rather the lack of adequate enforcement thereof. Administrative actions and the administrative decision making process and procedures carried out by the competent water authorities like the Department of Water and Sanitation are arguably the enforcement of water law in the realm of water administration and governance, (Kotzé, 2004).

The regulatory function belonging to the Department of Water and Sanitation brings about the realisation of section 27 of the Constitution. It must also be comprehended that there is a relationship between the enforcement of the water right and the administrative implementation. The enforcement of provisions relating to water authorisation such as water use license provided for in Chapter 4 of the National Water Act serves as an example of an instance where administrative execution through water administration is executed by the competent authority being the Department of Water and Sanitation. As previously mentioned that any administrative decision making within an organ of state in this case the Department of Water and Sanitation must follow the process as laid out in the PAJA.

It is important to understand the linkage between PAJA and the NWA as in the case heard in the Constitutional court case CCT 41/13, November 2013 in the matter between the Minister of Local government, Environmental Affairs and Development Planning of the Western Cape and the Lagoonbay Lifestyle Estate (Pty) Ltd, the George Municipality and the Cape Windlass Environmental Action Group and 24 Others. In this matter Lagoonbay Lifestyle Estate (Pty) Ltd appealed the decision made by the Minister of Local government, Environmental Affairs and Development Planning of the Western Cape for the refusal of its re-zoning application. Lagoonbay Lifestyle Estate (Pty) Ltd logged an appeal with the Constitutional Court arguing that the Minister of Local government, Environmental Affairs and Development Planning of the Western Cape has failed to uphold the requirements as set in the PAJA. The Constitutional Court made a ruling as follows:

- "(a) The application challenging the decision by the Minister of Local Government, Environmental Affairs and Development Planning in the Western Cape Provincial Government (Provincial Minister), dated 28 April 2011, to refuse the rezoning application of Lagoonbay Lifestyle Estate (Pty) Ltd (Lagoonbay) is dismissed.
- (b) It is declared that the decision by the Provincial Minister dated 28 April 2011, refusing Lagoonbay's application for the subdivision of certain properties, is unlawful and is accordingly set aside.

- (c) It is declared that the George Municipality is the competent authority under the Land Use Planning Ordinance 15 of 1985 to determine Lagoonbay's subdivision application.
- (d) Lagoonbay's subdivision application is remitted to the George Municipality for reconsideration.
- (e) Each party must pay its own costs in the High Court and in the Supreme Court of Appeal."

From the order above its clear that the Minister of Local government, Environmental Affairs and Development Planning of the Western Cape made a decision that is not allowed in the laws in which the Minister of Local government, Environmental Affairs and Development Planning of the Western Cape operates, thus the administrator has acted unlawfully.

In other cases, where the importance of PAJA has been highlighted is in the case of, *Vumazonke v MEC for Social Development, Eastern Cape, and three similar cases* 2005 (6) SA 229 (SE), where an application seeking to review the actions of the Eastern Cape MEC for Social development on the grounds that no decision in respect of the applicants' applications for social welfare grants had been taken. Plasket Justice began by conveying his extreme disappointment with the sheer volume of applications complaining of maladministration in the Eastern Cape Department of Social Welfare. In November 2004, he said, the motion court of the division dealt with over 100 applications of this nature – and this was by no means a unique occurrence. He referred to a number of cases where judges of the high courts had expressed similar outrage at the inefficiency and ineptitude of the department.

In *Somyani v MEC for Welfare, Eastern Cape and Another* (unreported case of the SECLD, case number1144/01) the situation had "proceeded to the point where the respondents were called upon to show cause why they should not be committed to prison for contempt of Court because of their failure to give heed to Court orders."

Further to this it's important to understand that procedure fairness is very import as in the case of *Maleka v Health Professionals Council of SA and Another* [2005] 4 All SA 72 (E) the applicant was taken off the register of private medical practitioners by the registrar of the first respondent without prior notice or the opportunity to be heard prior to this happening. Jones Justice held that this amounted to unfair administrative action. Although Jones J did not specifically mention the provisions of section 3 of PAJA, it is the case that section 3 provides

the statutory framework for the decision he reached. Section 3(2)(b)(i) and (ii) state that fair administrative action requires an administrator to give a person adequate notice of the nature and purpose of the proposed administrative action and a reasonable opportunity to make representations to the administrator. The manner in which the National Water Act is enforce is of an administrative nature which makes it essential to follow the procedure of PAJA.

2.4 Assess effectiveness of the remedies provided by the enforcement mechanisms when an offence is committed

Environmental remediation of water resources involves the removal of contaminants and pollutants from the resource with the aim of protecting the overall environment and human well-being, (Ahenkorah, 2018). Water is considered polluted if some substance or condition is present to such a degree that the water cannot be used for a specific purpose. Owa, (2014) define water pollution to be the presence of excessive amounts of hazard pollutants in water in such way that it is no longer suitable for drinking, bathing, cooking or other uses like irrigation of crops. The National Water Act defines pollution as the direct or indirect alteration of the physical, chemical or biological properties of a water resource. Section 19 of the National Water Act places a general pollution prevention duty on a person who owns, controls, occupies or uses the land, that person is responsible for taking reasonable measure to prevent pollution of water resources. The duty envisions that preventative measure must be taken not only on current or future pollution, but also historic activities which has causes water pollution. It must be noted here that the actual water pollution does not need to have occurred before the duty exists, the mere likelihood of pollution is sufficient. Although the National Water Act does not define "reasonable measure" it does suggest that these measure may include measures to:

- (a) cease, modify or control any act or process causing the pollution;
- (b) comply with any prescribed waste standard or management practice;
- (c) contain or prevent the movement of pollutants;
- (d) eliminate any source of the pollution;
- (e) remedy the effects of the pollution; and
- (f) remedy the effects of any disturbance to the bed and banks of a watercourse.

The NWA imposes a further pollution duty in emergency incidents as per Section 20. Where the pollution of water resources following an emergency incident, such as an accident involving

the spilling of a harmful substance that finds or may find its way into a water resource. The responsibility for remedying the situation rests with the person responsible for the incident or the substance involved. If there is a failure to act, the relevant catchment management agency may take the necessary steps and recover the costs from every responsible person. As per Section 19 of the NWA, Section 20 also places a duty on the responsible person to take reasonable measure to contain and minimise or clean-up or remedy the effects of the incident, (Sampson, 2001).

One of the objective of the study is to aassess the effectiveness of the remedies provided by the enforcement mechanisms when an offence is committed, what can be concluded is that NWA does not provide a specific remedial action for when an offence has taken place in contravention of the NWA. As previously mentioned the act only provide measures which can be assumed to be remedies.

Water pollution has distressing consequences on human health as well as the environment, a polluted river can damagingly affect the flora and fauna and the recovery could take years. Most often than not the polluter cannot fully remedy the situation to its previous state thus prevention of pollution becomes a better policy than remediation.

2.4.1 Remedies for offences in water law

As mentioned previously the investigation and prosecution of water crimes is very onerous. When water crimes eventually reach the courts, sentences imposed by the court are generally poor apart from a few exceptions. Fourie, (2009), states that the low penalties are due to the court being overloaded with violent crimes as well as the absence of adequate environmental sensitivity training for magistrates. September, (2012), mentioned that the reliance on criminal prosecution to enforce sanctions for water offence is problematic in the context of an over burden criminal justice system as well as the complexities involved in obtaining convictions and meaningful sanctions.

This have a tendency to discourage authorities from investigating and prosecuting cases, which results in the low prosecution rate for water crimes. Due to low case volume for water crimes a dedicated environmental court cannot be justified. Currently in South Africa the primary way to ensure that, a violator of National Water Act to pay a punitive monetary penalty or a sanction is to prosecute the offender beyond reasonable doubt in a criminal court and to rely on the court to levy an appropriate fine or sanction or both. This not only places an excessive burdened on the criminal justice system and as a consequence results in low prosecution success rate thus

discoursing water authorities from pursuing prosecution in the first place, Fourie,2009. The situation which is experience in the United Kingdom (UK) with respect to environmental non-compliance have great reverberation in the South African context. The detailed complexities and dynamics of environmental regulation as well as a judiciary that is often unfamiliar environmental law results in low punitive sanctions in courts, the (Macrory, 2010).

Macrory, (2010) indicates for a successful regulatory regime there must be an effective sanction regime, it forms the backbone of the regulator's advisory function. Its very existence will often act as an encouragement for compliance without the need to invoke the formal sanctions.

The objective of penalties is to increase compliance by creating a transparent system with appropriate sanctions that aims to get firms back into compliance which will ensure future compliance while at the same time providing a level playing field to allow regulators to pursue offenders who flout the law. In view of this Macrory, (2010) has developed six penalties principles. A sanction should, aim to change the behaviour of the offender; to eliminate any financial gain or benefit from non-compliance; be responsive; be proportionate to the nature of the offence and the harm caused; to restore the harm caused; to deter future non-compliance.

South Africa has developed a framework called the National Crime Prevention strategy, which was initiated by the Cabinet in March 1995. The strategy consists of a four-pillar approach to crime prevention.

Pillar 1: The Criminal Justice Process aims to make the criminal justice system more efficient and effective. It must provide a sure and clear deterrent for criminals and reduce the risks of re-offending.

Pillar 2: Reducing Crime through Environmental Design focuses on designing systems to reduce the opportunity for crime and increase the ease of detection and identification of criminals.

Pillar 3: Public Values and Education concern initiatives aimed at changing the way communities react to crime and violence. It involves programmes, which utilise public education and information in facilitating meaningful citizen participation in crime prevention.

Pillar 4: Trans-national crime programmes aim at improving the controls over cross border traffic related to crime and reducing the refuge which the region offenders to international criminal syndicates. Macrory, (2010) described two types of financial penalties, financial

penalties in criminal courts and administrative penalties. As indicated previously the ability to obtain meaningful sanctions in court tends to be problematic in South Africa as well as internationally.

Macrory, 2010, provided a case with poor sanction that occurred in the UK. A man from Oxfordshire was fine £ 30 000 by the court for dumping 184 drums of toxic waste. He was paid £58 000 for doing the dumping and it costed the waste authorities £167 000 to incinerate the toxic drums properly. Another case which Macrory also provide, a small waste disposal company was fine £ 25 000 by the court for operating without a waste disposal license. The company saved £ 250 000 by operating illegally for a period of two years. The wrong signal is send out with this type of sanctions and does not meet the penalty principle set out above. This type of sanctions fails to reflect the financial gain from non-compliance and as a result, these low sanctions can be seen as a calculated risk. Through the world in countries like the UK, the Netherlands and U.S.A, environmental regulation, health and safety and financial services (Internal Revenue Services and Competition boards) make use of monetary administrative penalties which is possibly a more effective manner to deter from non-compliance. Criminal courts are generally not involved in the issuing or enforcement of administrative penalties as they directly administered by governmental authorities.

Fourie, (2009) and Macrory, (2010), have indicated that criminal prosecution should be reserve for more serious cases of non-compliance and that empirical evidence has shown that administrative penalties are a more effective way to ensure compliance. Winstanley, (2009) and Hugo, (2014), mentioned that compliance is improved in a regulated community by the deterrence of violations and creating incentive. This is achieved by punishing non-compliance with the enforcement of administrative penalties. Furthermore, administrative penalties support the "the polluter pay" principle.

A benefit of administrative penalties is the lower standard of proof. Unlike criminal sanction, the standard of proof must be beyond reasonable doubt. Administrative penalties follow the balance of probabilities the civil standard of proof (Hugo, 2014). Criminal sanctions is very resource intensive in terms of finances and personnel unlike administrative penalties that is less resource intensive. As noted by Winstanley, (2009) and Craigie et al., (2009) the cost of administrative enforcement includes the cost of inspection and evidence collection that are incurred irrespective whether a violation is found or not. The procedural requirements for administrative penalties are less formal and easier to administer than to impose a criminal

penalty. The optimal punishment level is easier to determine for the administrative penalty system (Hugo, 2014). Criminal fine have a high risk of negative publicity, loss of reputation, the stigmata of criminal prosecution and the threat of a criminal record, administrative penalties does have that high risk associated which can result the less likelihood of being disputed.

Relying on fine alone have a number of short comings although financial penalties which is either issued by government authority (administrative penalties) or courts (punitive sanctions) have shown to have positive effect on compliance they are not always the most appropriate sanctions to change behaviour. Macrory, (2010), enumerates some of the hindrance to financial penalties as follow:

- **Deterrence** the effectiveness of a financial penalty is inherently linked to its value. Unless the fine is of optimal value, large companies may easily absorb the small fine which can then become part of doing business, like overhead cost which as result have impartial impact on day to day decision making regarding compliance.
- **Spill over** the offender is able to pass the fine over to third parties such shareholders, creditors or customers as the fines is so small to initiate behavioural change.
- **Unequal impact** small business is generally more vulnerable to financial penalties due to financial and credit constraints.
- **Reflecting the harm caused** physical or environmental damage which has been caused is not reflected in the fines administered.
- Lack of rehabilitation taking the needed steps to ensure continuous compliance can be costly and companies may find it more beneficial to treat fines as regular business losses rather than to address non-compliance, especially if non-compliance results in financial gains and fines imposed are insufficient to disprove these financial benefits.

The more efficient and effective way to encourage and reward desired behaviour rather than to punish non-compliance is to make use of the incentive base measure. It should be noted this measure also include disincentives which are aimed at discouraging certain forms of behaviour which might not always be positive. Incentive-based measures are diverse and include market-bases instruments, regulatory instruments and information based instruments, these instruments encourage persons/groups to go beyond compliance, (Kaka, 2012).

The state makes use of criminal law in order tell its citizens to behave in society by providing the prescribe law and what the consequence will be for breaking the law as well as what the punishment will be for breaking a law. When a criminal law is broken the states bring a legal action against the accused (the person charged with a crime). The complainant (the person who is the victim of the crime) is usually a witness in the court case. If the accused is found guilty he/she is punished for example by being fined or sent to prison or both).

2.4.2 Factors influencing compliance and non-compliance in water law

(Agbonjinmi, 2007), established that the two legal concepts compliance and enforcement are inversely proportional to each other. That is if compliance increase enforcement decrease. Should an absolute voluntary compliance "utopia" be achievable there would be no need for enforcement activities in the regulatory cycle. However, in reality, the relations between compliance and enforcement cannot be perfect, this is due to both compliance and enforcements are both social actions that differentially responds to political, social and economic factors as described by (Lange, 1999).

2.5 Theoretical framework

The assumption behind the statement, "Using water law enforcement to demonstrate the effectiveness of regulations for the protection of water resources" is that the current regulations for the protection of water resources work, that is, it is supposed to bring about some improvement in the conditions of the water resources with the Cape Town borders. For this study improvement means that the condition of the water resources in Cape Town with regulations are better than what it would have been without regulations.

Regulations seeks to make such improvement by changing individual or organisational behaviour in ways that generate positive impacts in terms of solving societal and economic problems. Coglianese, 2012, said at a most basic level regulation is designed to work accordingly. The regulations are implemented, which leads to change in the behaviour of individuals or target organisations or those affected by regulations, which lead to change in outcomes, such as improvement in an underlying problem or other changes in conditions.

Using water law enforcement to demonstrate the effectiveness of regulations for the protection of water resources therefore entails an inquiry, after water regulations has been put in to place, how has it change changed behaviour for the protection of water resources. What positive and negative impacts does the regulations have or had on the protection of water resources. What difference does the water regulation make in terms of the problem it purportedly seeks to solve?

The aim of the study is to enable evidence based decision making by identifying the strengths and weaknesses of the current enforcement and remedial action being used by the competent authorities when enforcement and compliance is enforced in terms of the legislations in which the competent authorities operates.

The study will as systematically and objectively as possible evaluate the effectiveness of the current enforcement mechanisms and remedial actions used for enforcing the water law. The study will specifically focus on the effectiveness of the enforcement mechanisms used as well as the effectiveness of the remedial action, which is a result of the enforcement mechanisms used. It will also look at what is hindering the attainment of maximum effectiveness for the enforcement mechanisms.

The study will seek to answer, but not limited to, the following questions related to the effectiveness criteria.

Criteria:

Effectiveness- The extent in which the implemented enforcement mechanism and remedial actions used were successful in achieving the protection of water resources.

Questions related to the criteria:

- What actual results were achieved by the current use of the enforcement mechanism and remedial actions? IN IVERSITY of the
- To what extent have the enforcement mechanisms and remedial actions used led to changes in behavioural practices and policy?

2.6 Conceptual framework

South Africa has a wealth of water legislation and statutory provisions for the protection of water resources. Despite this volume of water legislation water resources are not adequately protected as degradation still occurs on a regular basis. This maybe an indication that the State who must ensure that the legislation is to be enforced and to seek compliance is not able to keep up with this mandate.

Effectiveness is not an intangible theory. It is a feature of every legislative manuscript and is determined by the purpose of legislation, its substantive content and legislative expression, its overarching structure and real-life results. These features determine, the capacity of legislation

to achieve results. The purpose of legalisation sets the standard for what legislation aims to achieve. The substantive content feature and legislative expression feature determine how the law will achieve the desired results and how this is communicated to its subjects. The overarching structure feature determines how the new provisions interact with the legal system; and the real-life results of legislation indicate what has been achieved.

Even though the influence of external factors on the broader effects of legislation cannot be ignored, every legislation purpose is the foundation of its effectiveness. Thus, the effectiveness of a legislation is greatly determined by the way in which the legislation is integrated in the legal system. This integration is determined by how the legislative context is communicated, its functional content and how its evaluation requirements can inform on real-life results.

Effectiveness is at the same time a value and a principle that guides law making and provides a criterion for evaluating legislative results. Effectiveness therefore, has two main dimensions. The first dimension is a prospective dimension when the law is formulated and drafted. The second dimension is a real-life dimension when a law is implemented. The former expresses the extent to which legislation is beneficial to the desired regulatory effects while the latter expresses the extent to which the attitudes and behaviours of target populations correspond to those prescribed by the legislator.

Effective legislation is the outcome of difficult procedure in the conceptualization, design, drafting, enforcement, and implementation of the law. Effective legislation requires processes and institutions for regulatory governance and tools to guide legislative design, drafting and implementation. These tools can be assisted by an effectiveness test, a rational application that observes the distinctive features of existing legislation, by considering how the purpose, the structure, the content, and the results of the intended law are aligned and consistent.

The 'effectiveness test' allows the identification of the direct relation between the purpose of the legislation, the appropriateness of the means used and the results and can be used throughout the life-cycle of legislation8. For legislation in force it can examine the causal relationships between the law and its effects, the extent to which the legislation is working and what needs to change. In other words, the effectiveness test allows a diagnosis of the weaknesses in the conceptualization and design of legislation and can prevent regulatory failures. It allows identification at an early stage of the ineffectiveness of content and design (whether the rules used are inappropriate to address the problem tackled or are too broad or too narrow in relation to the stated purpose), the ineffectiveness of enforcement (whether the

enforcement strategy or mechanism is inappropriate or implementation is inadequate). Through the effectiveness test, weaknesses can be identified and addressed. The effectiveness test is a neutral tool.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter of the research looks at the methods that was used to conduct this research. The research question the methodology aimed to respond to was, "How are water law enforcement used to protect water resources". The methodological approach used to conduct this research was a qualitative approach. Firstly, in this chapter I look at the chosen qualitative approach, justifying why this research approach was chosen and what it entails for the research. Secondly, the chapter outlines the kind of data that was needed in order for me to be able to answer the research question and its subsequent research sub questions. The chapter then focuses on the instruments used to collect data and how they were used in this research. The chapter then goes into detail on how the data was collected and how the data was analysed. This outlines in detail the data collection process, all the challenges faced in the completion of this research; the process that was followed in analysing and representing the data. In the last section of the chapter describes the ethical considerations that had to be tackled in the development of this research.

In this study a qualitative research approach was followed. By using a qualitative approach, the researcher minimizes the gap between the researcher and those that were researched. This research was, for functional purposes, confined to the researcher's work surroundings in the Cape Town area. A qualitative research approach for this study was suitable, since its main purpose was to collect data regarding people in their everyday surroundings. Therefore, qualitative research approaches were made use of to collect data about the knowledge and understanding of Water Law enforcement officials from the regional offices of the Department of Water and Sanitation as well as from the Environmental Law officials from the regional offices of the Department of Development Planning and Environmental Affairs regarding their functions and duties.

The researcher had to understand the nature of experiences and ideas of these officials regarding the current functionality of the present water and environment law enforcement unit

within the National government and Provincial government and the shortcomings of not having a specialised unit consisting of both sections.

3.2 Research design

De Vos (2002), recognises five investigative designs that could be used in qualitative research, namely: Biography, Phenomenology, Grounded Theory, Ethnography and Case Study.

A research domain was selected with a phenomenological approach. In this study the participants from the Department of Water and Sanitation law enforcement section known as the "Blue Scorpions", as well as from the Department of Environmental Affairs Development and Planning the law enforcement section known as the "Green Scorpions "was included in this study. The participants were already experience in the different filed of water and environmental law enforcement.

The phenomenological approach was regarded appropriate, as this approach helped to grasp and explain the meaning that subjects gave to their routine lives. This design backed the intention of this study, namely factors affecting water law enforcement to demonstrate the effectiveness of regulations for the protection of water resources. The investigation was directed to the quality of facts given by the subjects.

This study also made used of the grounded theory. Samples of events and incidents of environmental and water contraventions involving action or interaction relevant to the research was sought from the participants involved in those events. The grounded theory approach was a simultaneous collection and analysis of data using a process known as constant comparative analysis. In this process, data was transcribed and examined for content relating to the study, this lead to the case study section of the study.

The Cases Study approach for this research was an inquiry of enforcement mechanism used for the protection of water resources and remedies the enforcement mechanism provided for the protection of water resources. The crux of this study was concerned with factors affecting water law enforcement to demonstrate the effectiveness of regulations for the protection of water resources. It relies on government reports to determine to: what extend of non-compliance with water laws in South Africa is and what the Department of Water Sanitation and Department of Environmental Affairs Development and Planning has done to enforce compliance. Secondary material like journals and peer review papers was used for how experts and others authors have

dealt with the subject of compliance monitoring and enforcement of water law in South Africa and globally as well.

The basis for the regulatory framework for the study was set on the following legislation, The Constitution (1996), the National Water Act 36 of 1998, the National Environmental Management Act 107 of 1998 and the Environmental Conservation Act 37 of 1989.

An exclusion for the study was the law enforcement section of the local municipality the City of Cape Town. The Constitution state in section 156(1) that a municipality has executive authority in respect of and has the right to administer the local government matters listed in Part B of Schedule 4 and Part b of Schedule 5. The local municipality by-law enforcement section for the purpose of the study has been excluded as the before mentioned section of the municipality is responsible for the enforcement of the City's by-law and traffic by-law, by clamping down on offence such general nuisances, alcohol offences, speeding, problem buildings and illegal formal trading.

Furthermore, the municipality function to water and sanitation services is limited to potable water supply systems and domestic waste-water and sewage disposal systems and not the protection of water resources as mandated by the National Water Act and National Environment Management Act.

UNIVERSITY of the

3.3 Methodology

The research design intended to provide an appropriate framework for the study. For the research design a significant decision was made regarding the research approach to the study, as the approach determines how relevant information for the study was obtained. The qualitative research method was used to understand participants, experiences, attitudes, behaviour and interactions when enforcing water and environmental regulations for water resource protection. Three broad categories of qualitative research are in existence for research, observational studies, interview studies and documentary, textual analysis of various written records. The study employed a mix type of methods. For this study two approaches were used. The first approach was the interview approach and the second approach was document analysis.

3.3.1 Interview

Semi-structured interview was conducted, with a total of 5 participants selected for the study. It must be noted that each participant has a minimum of 10 years' experience in the enforcement of the water and environmental regulations in respect to the law being the National Water Act, the National Environmental Management Act as well as the Environmental Conservation Act. The participants consist of two official from the Department of Water and Sanitation (DWS) who is mandated to enforce the National Water Act, two participants from the Department of Environmental Affairs and Development and Planning (DEA&DP) who has a mandate to enforce the National Environmental Management Act and the last participant was from the City of Cape Town municipality Environmental Management Department who has a mandate in terms of the Municipal Systems Act and the Environmental Conservation Act. The selection of the 5 participants was limited to their availability to have one on one meetings, telephonic conversations or the availability to converse via e-mail. Through these methods the researcher was able to get a wider perspective and a detailed view of the functioning of the three tiers of governmental departments.

3.3.2 Themes which were explored during the interview

The following themes were explored during the interviews:

- The day-to-day functioning of each department within the different tiers of government
- What enforcement mechanisms is used to enforce the relevant legislation
- What are the consequences should the enforcement measures not be complied with
- What remedies does the enforcement mechanism provide
- Has the enforcement of the legislation improved the protection of water resources

3.3.3 Document analysis

Documents serve a very important purpose as a data source for this research because in order to gain insight into the subject at hand and understand the workings of organisations responsible for the enforcement of water regulation. Document review and analysis involves identifying and utilizing data and information to answer the research question or issue than was intended by those that collected the data or prepared such documents. Once found, the relevant documents are also useful for understanding the political climate, the journey that led to the

development of the current legislation and the manner in which government addresses issues regarding water resources protection.

The DWS and DEA&DP websites provided useful sources of documents for review; however, more documents were identified during the semi-structured interviews with participants. The documents identified during interviews included journal articles, annual reports and newspaper articles, court outcomes and pre-compliance notices/ directives of which were authored by the interviewees on the work that has been done to date on water resource protection. Other sources included the very MSc and PhD thesis that attempted to address water resource governance issues as well as the enforcement of the water and environmental legislations in South Africa and a global perspective. These documents were considered key for this study mostly because they serve as a starting point to identify gaps and attempt to address them. The journal articles especially, helped in enhancing the understanding of relationships between key actors in the enforcement of regulation for water resource protection, the roles and responsibilities of the actors and the challenges experienced by these actors in playing these roles to support water resource protection. The review and analysis of policy and guidelines also assisted in the understanding of the relationship between international and national contexts of water resource monitoring and protection, its interpretation and operationalisation in the water legislation, strategies and guidelines and the analysis of contextual limitations that make policies ineffective.

For ease of reference, a document review and critical analysis checklist was developed, even though it was not followed meticulously, it was intermittently revised to appropriately address the study needs. These documents were very helpful as a sources of data for answering the study 's research questions and they also informed the overall study design and methods.

3.4 Research methods

Before discussing the research method, it is important to recap the key research aim and objectives that influence the study under which the methodology is anchored. The research aim for this study was to evaluate the effectiveness of the water legal system provided for the protection of water resources. The study consisted of two objectives; Objective 1 is to determine effectiveness of the enforcement mechanisms used for the enforcement of the National Water Act for water resource protection and Objective 2 is to assess the effectiveness of the remedies provided by the enforcement mechanisms when an offence is committed.

3.4.1 Data collection

The process of data collection for the two objectives for the study followed two approaches. The first being the analysis of documents and the second approach being a semi-structured interview.

Prior to conducting the interviews, I firstly conducted a document analysis, where I selectively picked documents that would give me an understanding of the different type of enforcement mechanism available and why a certain enforcement mechanism is used for the enforcement of the National Water Act. Further to this the document analysis approached was also used to determine what remedies the enforcement mechanisms provide when an offence has been committed in terms of the National Water Act. In searching for documents, I mainly used key words and phrases: "compliance monitoring and enforcement of the National Water Act of South Africa", "enforcement mechanism available for law enforcement", "what remedies does the National Water Act provide for non-compliance", "State of the environment for Cape Town", "court out comes in terms of non-compliance with National Water Act and Environmental Management Act". The documents selected from the Department of Water Sanitation and the Department of Environmental Affairs and Development and Planning websites, other search engines included Google, the Department of Justice South Africa and the University of Western Cape electronic library as well as the Centre for Environmental Rights South Africa website. The collected documents amounted to 200 documents raging from scientific journals, master thesis or doctorate studies, public documents, policies, guidelines to legislation. I scanned through all the documents which was collected in order to assess whether they contained information related to the two objectives of the study.

The second approached to collect data for the two objectives for the study was to undertake structured interview with key informants. For the study a total of 5 key informant was selected for the study. The key informants consist of two official from the Department of Water and Sanitation (DWS) who is mandated to enforce the National Water Act, two participants from the Department of Environmental Affairs and Development and Planning (DEA&DP) who has a mandate to enforce the National Environmental Management Act and the last participant was from the City of Cape Town municipality Environmental Management Department who has a mandate in terms of the Municipal Systems Act and the Environmental Conservation Act. Officials were sourced from different governmental departments in Cape Town partially because of the need to compare and contrast the different governmental departments function and duties relating to water resource protection. The selection of the 5 key informants was

limited to their availability to have one on one meetings, telephonic conversations or the availability to converse via e-mail.

In advance of their interviews and the initial meetings, all interviewees were sent an outline of the study together with a short theme introduction of the interview focus areas. Interviews ranged from between an hour and two hours in duration and were transcribed as opposed to digitally recording the interview, this allowed for a more relaxed atmosphere for the interviewees. All semi structured interviews used on key informant in this study had open ended questions so as to enable the interviewees to express their opinions openly. These open ended questions produced some very rich data which helped a lot seeing as the topic under discussion was multidimensional. As said, to allow for some level of uniformity all interviewes had core pre planned questions based on the objectives of the study so that all interviewees covered the same topic area, and could thus be compared or contrasted in the findings and analysis chapter.

3.4.2 Data analysis

Data analysis is the development of attaining order, structure and meaning in data that have been collected. Data analysis in the qualitative form is conducted with the aim of achieving validity, generalisation and testing the ability to meet research objectives.

After collecting information from data sources I analysed and represented the information in themes:

- a) Available enforcement mechanism
- b) Enforcement mechanism used by each governmental department in relation to the key informants
- c) Remedies provided by each governmental department in terms of the relevant legislation each key informant enforces.

For all the interviews conducted I analysed them using vertical and horizontal analysis technique (Van Zyl, 2016). Firstly, I would conduct a vertical analysis on individual interviews, that is, I would pick out from one interview the main points, the themes that emerged, and then summarise the overall sense of the interview. I tabulated the points drawn from each interview and summarises onto a matrix. I then conducted a horizontal analysis on the matrix which entailed performing a comparison exercise across the entire set of interviews. This was done in

order to holistically view the data collected, draw out themes from it; determine how views differed or reinforced each other; and assess the overall character of the discussion. I wanted to represent the data in themes but I also wanted to represent it in relation to the research questions so the deductive analysis approach was used to draw out the themes in the data. The deductive approach encompasses analysing qualitative data based on a structure that is predetermined by the researcher.

3.5 Quality assurance

The final step in the analysis was data interpretation, which involved efforts to interpret the reduced data sets. In this step, the constructed data sets were examined in detail, and emerging key themes were further examined and critically assessed. In further developing the key themes, I reviewed all the interview summaries and notes, and mind maps in order to create a detailed description of findings that provided a 'big picture' of the analysis. This process involved the searching for alternative explanations, contextualising the detailed description, and finally the writing up stage.

The analysis of documentary evidence, interviews and the academic literature continued throughout the entire research process in order to relate the findings to prior literature and theory, and to remain alert to contradictions within the gathered data.

3.6 Ethical consideration NIVERSITY of the

The University of the Western Cape sets out clear guidelines for ethical considerations which researchers have to abide by in order to their research. The research did not deal with vulnerable groups or people but what was of importance in terms of ethical consideration for the report was informed consent and confidentiality for the interviewees. Interviewees were told that their identities would be kept anonymous and care would be taken to not inadvertently identify them through reference to their name or job position if they wished to stay anonymous. This is to limit any foreseeable risks to public officials' reputations or their sitting in the organization because of how their views are reported.

The participants were informed on the nature of the research, its purpose, the research aims and their rights as participants before the interview. No payments were made to any participant for their participation in this study.

3.7 Study limitations

The study would have benefitted from a greater number of participants to provide a more diverse and rich picture of the perspectives on water resource protection within South Africa. Nevertheless, within the 48 months of data collection, there were some good insights found useful in informing findings and conclusions for this study.

One of the fears was that participants would not be forthcoming with information as some of the questions required participants to criticize their employer or other co-workers. This was avoided by conducting one on one interviews in consenting participant 's private office at their place of work, or any other private office or at a location of their choice where the conversation would be private and not be heard.

Analysis was not only based on theory and viewpoints of other researchers, but also personal experiences in interactions with law enforcement officials of government departments and general water resource managers in Cape Town. Different people interpret data differently and personal experiences played a role when analysing qualitative data and this research was no exception. Coming from a natural science background where a fair amount of laboratory work was conducted; it was a challenge to transition into the social world and delve into social issues and articulate them in a rational manner. A considerable amount of time was spent trying to understand social science theory and its basic tenets and how they could be applied in this study.

WESTERN CAPE

CHAPTER 4: RESULTS AND DISCUSSION

4.1 Introduction

The current study has two objectives and this chapter presents and discusses results on the two objectives. The first objective was to determine effectiveness of the enforcement mechanisms used for the enforcement of the National Water Act. The second objective was to assess effectiveness of the remedies, which the enforcement mechanisms provide when an offence is committed. Analysing enforcement mechanism encounters challenges in the enforcement sections of the legislation and management measures. Although compliance and enforcement activities have a role to play in attaining the environmental right in terms of Section 24 of the Constitution, these were not being utilised as intended to improve the state of the environment. Reviewing the existing policy framework is one-step but assessing operational aspects of compliance and enforcement is the most desired aspects. This chapter provides presents and discusses results on effectiveness of the enforcement mechanisms and the effectiveness of the remedies, which the enforcement mechanisms provide when an offence is committed. A case study approach was followed and results presented in this chapter came from those particular case studies.

4.1 Description of results

For the purpose of this study, four case studies were selected within the City of Cape Town boundaries based on the enforcement process that is used by the Department of Water and Sanitation. The first case involves the diverting the flow of water of a watercourse. This contravention occurred in the Constantia suburb in Cape Town and will be known as Constantia Case 1. The second case study involves the extraction of water from water resource without the required license in terms of the National Water Act. This case occurred in the Constantia suburb and will be known as Constantia case 2. The third case occurred in the Phillipi suburb which involved the discharge of effluent, this will be known as the Philiphi case The fourth case occurred in Mfuleni suburb which involves the infilling of a water resource with building waste without authorisation from the Department of Water and Sanitation. This case will be known as the Philiphi case.

As mentioned in the previous chapters' the law makes it possible to choose different categories of enforcement mechanisms in reaction to non-compliance with the National Water Act, however it is important that the most appropriate action is followed, which sometimes may be

a combination of different enforcement mechanisms. The elected mechanism used by the Department of Water and Sanitation is that of an administrative enforcement mechanism. In all four cases studies the enforcement starts with a site inspection to determine the contravention in terms of the National Water Act. Refer to Appendix A for the specific sections of the National Water Act that were used for compliance in the four case studies. In the Constantia case 1 (Appendix B), the contravention identified by the official is Section 21(c), 21(i) and Section 40. In the second study, Constantia case 2 (Appendix C) the contravention was Section 21(a) and Section 40 and the Philippi case (Appendix D) it was Section 19(1); 19 (2); 19(3) and Section 40. The Mfuleni case (Appendix E), the contraventions were Section 19(1); 19(2); 19(3), Section 21 and Section 40. The competent department then proceeded with the administrative enforcement mechanism as per Section 53 (1) (a-c) by issuing a notice of intention to issue a directive on each of various the landowners or the responsible persons for the land on which the contraventions has occurred. The purpose of the notice of intention is to inform the responsible person of the land or the landowner of the contravention, which has taken place on the land and why it is it, a contravention. The notice of intention then further informs the responsible person or the landowner what can happen if the instructions to rectify the contraventions is not followed before a specified date. It also affords the responsible person of the land or landowner an opportunity to make representation as to why a directive in terms of the National Water Act should not be issued.

The notices conclude by informing the responsible persons of the land or the landowners in the four cases that the activities which were being conducted requires authorization from the competent department as per Section 21 (water use) and Section 40 (water license) and that it is a criminal offence in term of Section 151 (1). Should a person contravene Section 151(1) and is found guilty in terms of Section 151(2) is liable on first conviction to a fine or to imprisonment for period not exceeding (5) five years or both such fine and such imprisonment.

Out of the four case studies, three of the matters were taken to court as the responsible persons or the owners of the land failed to comply with the instruction in the directive, which was issued on them. The cases taken to court were namely the Constantia Case 1, Constantia Case 2 and the Mfuleni case. The court made the following judgement for each of the case studies taken to court.

The Constantia Case 1: The matter was settled outside of the court proceedings as the competent department being Department of Water & Sanitation failed to respond to the

representations made by the accused, which resulted in the administrative process being flawed. It was also further mediated even if the department responded to the responded agreed to the representation made by the accused it would also been flawed as the instruction made by the competent department to rectify the contravention would have triggered a listed activity in terms of the National Environmental Management Act. The mediation concluded that the accused needed to obtain all the relevant approvals necessary in order to rectify the situation.

The Constantia Case 2 the owner of the property complied with the Directive issued in terms of Section 53 of National Water Act. Apart from the Directive the owner of property was also issued an interdict by the Western Cape High court case number 5977/19. The South Africa National Parks Board brought the matter to the court as the owner was taking water from an unknown tributary flowing from the National Table Mountain Park. The interdict instructed the owner to cease with the abstraction of the water from the water resource.

The Mfuleni Case the court ordered to rehabilitate the affect water resource by making use of the services of an Environmental Assessment Practitioner (EAP). The EAP must prepare a waste impact report and rehabilitation plan, which must evaluate the impacts of the activity on the water resource and must provide recommendations as to how the rehabilitated work will take place.

The Philippi Case the owner of the property complied with instruction of the notice intention a directive. As per the notice of intention, the owner had to provide:

- a) a scope and programme of the pollution prevention the owner will undertake
- b) submit an Environmental Impact Assessment and Water Quality Management Report on a monthly basis
- c) the owner had to install measuring devices at the final effluent discharge irrigation area and records had to be kept on a monthly basis
- d) submit a plan outlining the remediation work.

4.2 Descriptive and Interpretation of the results

The results presented for objective 1 and 2 of this study present a clear indication that the preferred mechanism for enforcement of the National Water Act is a combination of the enforcement mechanisms available. The opted enforcement mechanism for the National Water Act is the administrative enforcement mechanism in combination with the criminal mechanism, see table below.

Table 2: Summary of results for the Case studies

	Constantia	Constantia	Philippi	Mfuleni
Case Study	Case 1	Case 2	Case 3	Case 4
Activity	Diverting the	The	The discharge	The infilling of
	flow of water	abstraction of	of effluent	a water
	of a water	water from a		resource
	resource	water		
		resource		
Enforcement Process				
Contravention	Sec.21(c)&(i);	Sec.21(c)&(i);	Sec. 19 (1), (2)	Sec. 19 (1), (2)
	Sec. 40	Sec. 40	& (3)	& (3)
			Sec 21	Sec 21
			Sec 40	Sec 40
			Sec 53	Sec 53
			Sec 151 (1) &	Sec 151 (1) &
- E			(2)	(2)
Enforcement Mechanism	Admin Sec 53	Admin Sec 53	Admin Sec 53	Admin Sec 53
Enforcement Tool	Notice	Notice	Notice	Notice
Commands/Instruction 🕤	to rectify the	to cease the	to rectify the	to rectify the
	contravention	activity	contravention,	contravention,
			within the	within the
			time	time
Compliance Achieved	No	Yes	Yes	No
Next Enforcing Mechanism	Sec 151 (1) &	Sec 151 (1) &	Sec 151 (1) &	Sec 151 (1) &
	(2)	(2)	(2)	(2)
Next Enforcement Tool	Criminal			Criminal
Penalty				
State of water resource	Rehabilitated			Rehabilitated

From the four case studies the preferred remedies provided by the administrative enforcement mechanism is to cease, modify or control any act or process causing the pollution.

What can be highlighted from the results, specifically the Mfuleni case. The competent authority being Department of Water and Sanitation. Issued a non-compliance notice on the City of Cape Town municipality. Informing the municipality that it is in contravention of

Section 19 of the National Water Act. Subsequently the municipality made representation to DWS advising the competent authority that the municipality is not the owner of the land neither is it the care take of the land on which the water resource is situated. The municipality had a site meeting with DWS as well as the responsible person who caused the contravention of Section 19 of the NWA. The site meeting resulted in the municipality to issue a notice of intention on the responsible person who caused the environmental degradation in terms of the Environmental Conservation Act refer to Appendix E. In the end, the City of Cape Town municipality has taken the responsible person to court; see Appendix E for more details. after the City of Cape Town court case the competent authority being DWS also to the matter to court, refer to Appendix F, which also highlight other court outcomes on matters which DWS has taken to court.

As mentioned in the literature review, Briad, (2017) mention that there are two types of rehabilitation. Namely initiative-driven rehabilitation and enforcement driven rehabilitation. When compared to the results it is clear those remedies provided by the enforcement mechanism it is not effective for the protection of water resources, see table below.

Table 3: The resultant effect of remedies provided by the enforcement mechanism for the National Water Act, (modified from Briad, 2017)

	Initiative-driven	Enforcement-driven	
Characteristics	rehabilitation UNIVERS	rehabilitation (Remedies provided by the	
		enforcement mechanisms)	
	Proactive (Strategic	Reactive (illegal activity)	
Activation Process	approach contributing to		
	set objectives)		
Size	Sub-catchment, several	Site specific and resultant	
3126	kilometres (km) of river	impacts; short reach	
	Government Departments,		
Stakeholders	NGOs, CBOs, funding	Land owner (person in	
Involved	agencies, municipality, land	control of the land)	
	owner		
Funding	Donors, government	Land owners responsibility	
		/person responsible for the	
		land	
Rehabilitative	Clearly set out,	Ad hoc, site specific, not	
Objectives	comprehensive, detailed	comprehensive	
		Short timeframes, in order to	
Timeframe	Long process	prevent further	
		impacts/damage	

		Illegal or non-compliant
Rehabilitation	Public concern /	legislative requirements and
Drivers	Conservation driven	Government Department
		driven

4.3 Comparative analysis and Evaluation of the results

The results presented for objective 1 and 2 of this study present a clear indication that the preferred mechanism for enforcement of the National Water Act is a combination of the enforcement mechanisms available. The opted enforcement mechanism for the National Water Act is the administrative enforcement mechanism in combination with the criminal mechanism. For this section a comparative analysis was done. The comparison will be the enforcement mechanism used by a different governmental department who shares a similar mandate like the Department of Water and Sanitation for the protection of the environment.

As indicated in the literature review section of this study there are four specific enforcement mechanism available. The enforcement mechanisms available is as follows:

- 1. Informal enforcement mechanism
- 2. Administrative enforcement mechanism
- 3. Criminal mechanism
- 4. Civil mechanism

When compared to the Western Cape provincial department, Department of Environmental Affairs Development & Planning (DEA&DP) which have a mandate to enforce the National Environmental Management Act. It is clear that DEA&DP, which houses the Green Scorpion, follows the same administrative enforcement mechanism available as mentioned above. The administrative enforcement mechanism is also used in combination with criminal enforcement mechanism. The diagram below is for the enforcement process for the Green Scorpions.

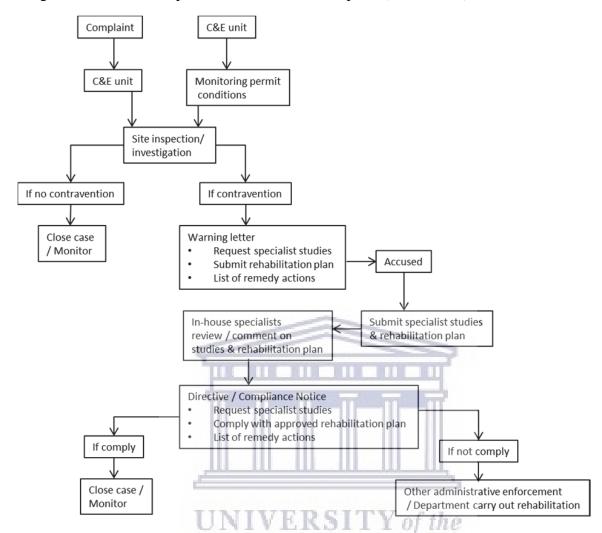


Diagram 1:Enforcement process for the Green Scorpion, (Briad, 2014)

In comparison with the Department of Environmental Affairs, Development, and Planning the remedies that the department provide is no different to that the Department of Water and Sanitation provide. As mentioned in chapter 2 of the literature review the remedies provided when a contravention has been detected is to:

- (a) cease, modify or control any act or process causing the pollution;
- (b) comply with any prescribed waste standard or management practice;
- (c) contain or prevent the movement of pollutants;
- (d) eliminate any source of the pollution;
- (e) remedy the effects of the pollution; and
- (f) remedy the effects of any disturbance to the bed and banks of a watercourse.

When comparing the National Water Act Section 19 to the National Environmental Management Act, Section 28(4) of NEMA places a general duty of care on all persons, including juristic persons. It provides that all persons:

"who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment."

The processes essential in the NEMA duty of care includes but are not limited to the following:

- investigate, assess and evaluate the impact on the environment,
- inform and educate employees about the environmental risks of their work and the manner, in which their tasks performed in order to avoid causing significant pollution or degradation of the environment,
- cease, modify or control any act, activity or process causing the pollution or degradation,
- contain or prevent the movement of pollutants or the causing of degradation,
- eliminate any source of the pollution or degradation, or
- remedy the effects of the pollution or degradation.

The National Water Act, Section 151(2) provides that a person who contravenes Section 151(1) is guilty of an offence and is liable on first conviction to a fine or to imprisonment for period not exceeding (5) five years or both such fine and such imprisonment. However, unlike the National Water Act the National Environmental Management Act, when failing to comply with a compliance notice is considered a criminal offence, punishable on conviction with a fine of up to R10 million or a maximum of 10 years' imprisonment or both such fine and such imprisonment. In comparison, NEMA provides higher penalties for failing to comply with NEMA unlike the NWA.

4.4 Implication of the results for practice and policy

In the absence of a formal policy review, this research was to use water law enforcement to demonstrate the effectiveness of regulations for the protection of water resources. This consisted of two objectives. One to determine the effectiveness of the enforcement mechanisms used for the enforcement of the National Water Act. From the results of objective one, it is

clear that enforcement mechanism implemented by the organs of state for the protection of water resource is effective in terms of time and cost. The second objective were to assess the effectiveness of the remedies provided by the enforcement mechanisms when an offence is committed. There are many existing river assessment methodologies and tools to prioritise rehabilitation however, few of these have applicability to enforcement for the protection of water resources. This is an area, which needs to be reviewed as the enforcement mechanism is focused on legislative box ticking instead of the prevention of degradation and protection of water resources. As highlighted in the previous chapters, there is a numerous of legislation resulting in overlapping mandates and jurisdictions between institutions and spheres of government

4.5 Summary Chapter

This research addresses the challenges in the enforcement mechanisms of the National Water Act for the protection of water resources and the remedies, which the enforcement mechanism provide. This requires a multi-disciplinary approach that requires the understanding of key concepts from a number of different disciplines that have a direct or indirect influence the protection of water resources.

UNIVERSITY of the WESTERN CAPE

Chapter 5: Conclusion and recommendation

5.1 Introduction

In the study, a closer look has been taken to understand what enforcement mechanisms is available in order to enforce the National Water Act. The study also tried to determine what remedies these enforcement mechanisms provide for the protection of water resources. The results obtained for the two objectives for this study highlighted that there is a need to review the current enforcement mechanism in relation to the remedies it provides when used. As the current remedies is only site specific and is not enforced or manage in a holistic manner to provide protection of a water resource.

5.2 Summary of work

Chapter 1 of this research outlined the motivation, context, and structure of the research. The specific problem statement of the research was to demonstrate, using water law enforcement the effectiveness of the regulation for the protection of water resources. If not, then to identify the strength and weaknesses of the remedies the current enforcement mechanisms provide when non-compliance with the NWA has been detected and to consider ways in which to improve the remedies or sanctions by analysing past cases of non-compliance and what the outcome was in terms of being effective in protection and conserving the water resources

Chapter 2 introduced key concepts that formed the theoretical foundations for this thesis. These included the purpose of enforcement, what enforcement mechanisms is available, what enforcement mechanism is used. The chapter also highlighted the remedies that the enforcement mechanism provides for the protection of water resources.

Chapter 3 focused on the research methodology that was used to collect and analyse data. The study was a desktop-based study, which focuses on the analysis of using water law enforcement to demonstrate the effectiveness of regulations for the protection of water resources. It relied on government reports to ascertain to what extent the non-compliance with water laws in South Africa is and what the Department of Water Sanitation has done to enforce compliance.

Chapter 4 highlighted the results of the two objectives of the study. The first objective was to determine the effectiveness of the enforcement mechanisms used for the enforcement of the

National Water Act. The second objective was to assess effectiveness of the remedies, which the enforcement mechanisms provide when an offence is committed. Water resource rehabilitation can be categorised as initiative-driven or enforcement-driven. The resulted present indicates that the administrate enforcement mechanisms in combination with the criminal enforcement mechanisms is the preferred route to achieve compliance for the National Water Act, the administrative route is also more cost effective as well as more flexible should an administrative error been detected. Unlike the criminal enforcement mechanism that is very onerous and any mistake in terms of person's constitutional right or any error in the administrative process that has not been correct prior to court trail, will result in court throwing the matter out of court. It has to be noted, because there is a criminal aspect linked to noncompliance the matter will be heard in a regional court and not a magistrate court. Regional court fees are significantly higher than magistrate courts. The remedies provided by the enforcement mechanism it is not effective for the protection of water resources. In the literature chapter Rurterfurd et. al, 2000, provided five objectives for rehabilitation, none which is achieved by the enforcement mechanism or the remedies provided by that enforcement mechanism. The remedies provided is merely an effort to bring the non-compliance into compliance with the legislation.

5.3 Research question and thesis statement addressed

UNIVERSITY of the

South Africa is often acknowledged to have some of the most modern and progressive legislation concerning the use and the management of water resource, and yet the act has been partially successful, Schreiner, 2013. The partial effectiveness of the application of the National Water Act is because of many factors. Such as the lack of human resources within some departments that have a mandated to implement the NWA or it could also be a lack funds available to allow officials to conduct their work in a more efficient manner.

5.4 Recommendation of the findings from the 2 objectives

The South African environmental enforcement administration is still in an "evolving" phase, and as it matures the necessary capacity, capability and institutional support will evolve. A formal execution protocol must be developed and implemented, for example in terms of the Intergovernmental Relations Framework Act, Act 13 of 2005, between the enforcement institutions regarding co-operative enforcement for the protection of water resources, including

who to contact, how to contact them, and guidance on which agency should take the lead per case. There needs to be both institutional and legal reform to address the inconsistencies and similarities in the legislative mandates of the institutions and organs of state tasked with the various components of water resources protection.

A dedicated rehabilitation component should be established to identify rehabilitation needs in the area of jurisdiction, to set rehabilitation objectives, design rehabilitation plans, implement rehabilitation projects and qualitatively monitor the outcomes of the rehabilitation, whether initiative-driven or enforcement-driven rehabilitation. Such a unit could address the rehabilitation needs of retrospective environmental degradation, especially cases where the state is now accountable for such rehabilitation. It could also provide assistance, support to initiative-driven, and enforcement driven rehabilitation projects, especially in terms of planning, setting objectives and providing technical guidance.

There are more than a few overlapping statutes affecting water resources. There is a variety of institutions at the different spheres of government tasked with enforcement of their respective legislation. This leads to fragmentation of enforcement efforts. A suggestion to overcome this disintegration is to develop a central agency with officials, mandated in all the environmental legislation. This will reduce gaps in mandates, reduce fragmentation of efforts, and enable more effective enforcement and holistic protection of water resource.

UNIVERSITY of the WESTERN CAPE

References

- 1. Agbonjinmi, A. (2007). Enforcement of criminal offences in terms of the national water act 36 of 1998. (Unpublished LLM, University of Limpopo, Turfloop Campus).
- 2. Ahenkorah, E. (2018). A critical investigation into the effectiveness of soil and water remediation efforts in Steel Valley, Vanderbijlpark. (Unpublished MSC, University of South Africa).
- 3. Astalin P.K. (2013). Qualitative research design: a conceptual framework. Internal Journal of Social Science & Interdisciplinary Research. ISSN 2277-3630, IJSSIR, Vol.2 (1), January (2013). Available at: indianresearchjournals.com
- 4. Braid, Samantha Germaine. (2017). Does the South African water resources management regulatory governance framework achieve its constitutional responsibilities in regard to section 24 of the Constitution of the Republic of South Africa, Act 108 of 1996. (Unpublished Doctor of Philosophy, University of Witwatersrand, 2017).
- 5. Cassim, Zaheer (19 January 2018). "Cape Town could be the first major city in the world to run out of water". USA Today.
- 6. Craige, F., Snijman, P., and Fourie M.(2010). Dissecting Environmental Compliance and Enforcement: Chapter 3 in Paterson, A. and Kotze, L. (2010). Environmental Compliance and Enforcement in South Africa: Legal Perspectives. (Juta, Cape Town).
- 7. De Vos, A.S. (2002). Qualitative data analysis and interpretation. In de Vos, A.S.(Ed.). Research at grass roots. 3rd Edition. Pretoria: Van Schaik publishers.
- 8. Du Plessis, W. and Nel, J. (2011) 'Driving Compliance and Enforcement of South Africa Legislation by Means of a Hybrid of "New" Environmental Goverance Instruments', in Paddack, L., Du Qun, Kotzé, L., Markell, D.L., Markowitz, K.G., Zaelke, D. Compliance and Enforcement in Environmental Law: Toward More Effective Implementation. Cheltenham: Edward Elgar.
- 9. Fourie, M. (2009). How civil and administrative penalties can change the face of environmental compliance in South Africa. Available at: https://cer.org.za/wp-content/uploads/2011/11/Fourie-M-SAJELP-Paper-June-2009-Final.pdf
- 10. Hall, J.H., Snijman., P. and Kotze., J.D. (2013). Basic training course manual: Part 2: Understanding Key Legislation. Department of Environmental Affairs

- 11. Hall, J.H., Snijman., P. and Kotze., J.D. (2013). Basic training course manual: Part 3: Being an Environmental Inspector in Practice. Department of Environmental
- 12. Hanley, N., Shogren, J.F, and White, B. (2001). Introduction to Environmental Economics, 1st ed. (New York: Oxford University Press).
- 13. Hugo, R. (2014). Administrative penalties as a tool for resolving South Africa's environmental compliance and enforcement woes. (Unpublished MSC, University of Cape Town).
- 14. Jabeen, Azra., Huang, Xisheng. And Aamir, Muhammad. (2015). The Challenges of Water Pollution, Threat to Public Health, Flaws of Water Laws and Policies in Pakistan. (Journal of Water Resource and Protection, 2015,7, 1516-1526.
- 15. Kaka, Imraan. (2012). Corporate self-regulation and environmental protection. (Unpublished LLM, North-West University, South Africa, 2012).
- 16. Kidd, Michael. (2002) alternatives to the criminal sanction in the enforcement of environmental law (2002, SAJELP 9 22-50).
- 17. Kidd, Michael. (2002). The Protection of the Environment through the Use of /criminal Sanctions: A Comparative Analysis with Specific Reference to South Africa. (Unpublished PHD, University of Natal, Pietermaritzburg, 2002).
- 18. Kidd, M. (2011). Poisoning the right to water in South Africa: What can the law do?

 Available at: https://cer.org.za/wp-content/uploads/2011/11/UNE-Paper-Kidd-Final-20110408.pdf
- 19. Kotzé, L.J. The application of just administrative action in the South African Environmental Governance Sphere: An analysis of some contemporary thoughts and recent jurisprudence (2004). ISSN 1727- 3781. PER/PELJ 2004(7)2.
- 20. Kipyego, S. and Ouma, Y. (2018). Analysis of nonpoint source pollution loading on water quality in an urban-rural river catchment using GIS-PLOAD model: Case study of Sosiani River watershed. Civil and Environmental Research, ISSN 224-5790.Vol 10, No 3, 2018
- 21. Lange, B. (1999). Compliance Construction in the Context of Environmental Regulation. Social & Legal Studies, 8(4), 549–567. doi:10.1177/a010430
- 22. Marina, M. (2006). An Investigation into the Negative External Impact of Water Pollution, Public Policy Options and Coping Strategies- with specific reference to the Lotus River Catchment area. (Unpublished M. Com, University of Western Cape, 2006).

- 23. Macrory, R. (2010). Regulation, Enforcement and Governance in Environmental Law. (Oxford: Hart Publishing).
- 24. Maleka v Health Professionals Council of SA and Another [2005] 4 All SA 72 (E)
- 25. Malmqvist, B., & Rundle, S. (2002). Threats to the running water ecosystems of the world. Environmental Conservation, 29(02): 134-153
- 26. Nkosi, R.Busi. and Odeku, O. Kola. (2014) Analysis of Water Pollution Control in South Africa, Mediterranean /journal of Social Science, MCSER Publishing, Rome-Italy 5(23) (2572-2582).
- 27. Owa, F.W. (2014). Water pollution: source, effects, control and management. ISSN 2300-9675. International Letters of Natural Sciences 3(2014)1-6.
- 28. Spulber, N., and Sabbaghi, A. (1998). Economics of Water Resources: From Regulation to Privatization, 2nd ed. (Massachusetts: Kluwer Academic Publishers).
- 29. Paterson, A. and Kotze, L. (2010). Environmental Compliance and Enforcement in South Africa: Legal Perspectives. (Juta, Cape Town).
- 30. Patton, M. Q. (2002). Qualitative evaluation and research methods (3rd Ed.). Thousand Oaks, CA: Sage Publications, Inc.
- 31. Prasad, N. (2007). "Why is regulation insufficient? Social policies and private sector participating in water supply". United Nations Research Institute for Social Development
- 32. Rutherfurd, Ian D., Jerle, Kathryn. and Marsh, Nicholas. (2000). A rehabilitation manual for Australian Streams, Volume 1. Cooperative Research Centre for Catchment Hydrology Land and Water Resources research and development CorporationSchreiner, B. (2013) Viewpoint-Why has the South African national water act been so difficult to implement? (Water Alternative 6(2).
- 33. Schreiner, B., Chimuti, S., Gouws, M. And Mbanda, V. (2011). Towards water resources regulation in South Africa, volume 1: Survey of Approaches to Water Resources Regulation. (Water Research Commission, 1842/1/11).
- 34. Sampson, I. (2001). Introduction to a Legal Framework to Pollution Management in South Africa. WRC Report No TT 149/01.
- 35. September, L.M.F. (2012) A critical analysis of the application of S24G provisions of the National Environmental Management Act (NEMA) the Gauteng experience. (Unpublished MSC, North-West University, Potchefstroom Campus).
- 36. Snijman, P., Molteno, C. and Paterson, M. (2010). Operational Manual for Environmental Management Inspectorate, Rev 1, Norwegian Embassy.

- 37. South Africa. (1977). Criminal Procedure Act 51 of 1977. Available at: http://www.justice.gov.za/legislation/acts/1977-051.pdf
- 38. South Africa. (1996). Constitution of the Republic of South Africa 10 December 1996. Available at: https://www.refworld.org/docid/3ae6b5de4.html [accessed 19 November 2019]
- 39. South Africa. (1998). National Water Act 36 of 1998. Available at http://portal.unesco.org/en/ev.phpURL_ID=47385&URL_DO=DO_TOPIC&URL_SECTION=01.html
- 40. South Africa. (1998). National Environmental Management Act 107 of 1998. Available at: https://cer.org.za/wp-content/uploads/2014/02/NEMA-107-of-1998.pdf
- 41. South Africa. (2000). Promotion of Administrative Justice Act 3 of 2000. Available at: http://www.justice.gov.za/legislation/acts/2000-003.pdf
- 42. Somyani v MEC for Welfare, Eastern Cape and Another (unreported case of the SECLD, case number1144/01)
- 43. Van Zyl, S. (2016). Preliminary processing of qualitative data, research writing workshop held on the 4th of august at the wits university graduate centre seminar room.
- 44. Vumazonke v MEC for Social Development, Eastern Cape, and three similar cases 2005 (6) SA 229 (SE),
- 45. Winstanley, T. (2009) 'Administrative Measures', in Paterson, A. and Kotzé L. (eds) Environmental Compliance and Enforcement in South Africa- Legal Perspective, Juta Law: Cape Town.
- 46. Winter, G. (2000). A comparative discussion of the notion of validity in qualitative and quantitative research. The Qualitative Report, 4(3&4). Retrieved February 25, 1998, from http://www.nova.edu/ssss/QR/QR4-3/winter.html
- 47. Zaelke, D., Stilwell, M. and Young, O. (2005) 'What reason Demands: Making Law Work for Sustainable Development: Chapter 1' in Zaelke, D., Kanairu, D. and Kružiková, E. (eds) Making Law Work: Environmental Compliance and Sustainble Development vol 1 (2005) at 45.
- 48. A judgement made on the 31 January 2018 by the High court of South Africa (Gauteng division) case number 44773/2016, the matter between Interwaste (Pty) (applicant) v Petlane N.O, Badenhorst N.O., MEC for Economic, Environment, Agriculture and Rural Development (Respondents).
- 49. 2013 in the matter between the Minister of Local government, Environmental Affairs and Development Planning of the Western Cape and the Lagoonbay Lifestyle Estate

(Pty) Ltd, the George Municipality and the Cape Windlass Environmental Action Group and 24 Others



APPENDICES

APPENDIX A

Summary of the section used from the National Water Act for the four case studies.

Prevention and remedying effects of	Water use	Application for licence	Rectification of contraventions	Offences
pollution				
19. (1) An owner of land,	21. For the purposes of	40. (1) A person who is	53. (1) A responsible	151. (1) No person may -
a person in control of	this Act, water use	required or wishes to	authority may, by notice	(a) use water otherwise than as permitted under this Act;
land or a person who	includes -	obtain a licence to use	in writing to a person	(b) fail to provide access to any books, accounts, documents or assets when required to do so
occupies or uses the	(a) taking water from a	water must apply to the	who contravenes -	under this Act;
land on which -	water resource;	relevant responsible	(a) any provision of this	(c) fail to comply with any condition attached to a permitted water use under this Act;
(a) any activity or	(b) storing water;	authority for a licence.	Chapter;	(d) fail to comply with a directive issued under section 19, 20, 53 or 118;
process is or was	(c) impeding or diverting	(2) Where a person has	(b) a requirement set or	(e) unlawfully and intentionally or negligently tamper or interfere with any waterworks or any
performed or	the flow of water in a	made an application for	directive given by the	seal or
undertaken; or	watercourse;	an authorisation to use	responsible authority	measuring device attached to a waterworks;
(b) any other situation	(d) engaging in a stream	water under another	under this Chapter; or	(f) fail or refuse to give data or information, or give false or misleading data or information when
exists, which causes, has	flow reduction activity	Act, and that	(c) a condition which	required to
caused or is likely to	contemplated in section	application has not been	applies to any authority	give information under this Act;
cause pollution of a	36;	finalised when this Act	to use water,	(g) fail to register an existing lawful water use when required by a responsible authority to do so;
water resource,	(e) engaging in a	takes effect, the	direct that person, or	(h) intentionally refuse to perform a duty, or obstruct any other person in the exercise of any
must take all reasonable	controlled activity	application must be	the owner of the	power or
measures to prevent any	identified as such in	regarded as being an	property in relation to	performance of any of that person's duties in terms of this Act;
such pollution from	section 37(1) or declared	application	which the contravention	(i) unlawfully and intentionally or negligently commit any act or omission which pollutes or is
occurring, continuing or	under section 38(1);	for a water use under	occurs, to take any	likely to
recurring.	(f) discharging waste or	this Act.	action	pollute a water resource;
(2) The measures	water containing waste	(3) A responsible	specified in the notice to	(j) unlawfully and intentionally or negligently commit any act or omission which
referred to in subsection	into a water resource	authority may charge a	rectify the	detrimentally affects or is likely to affect a water resource;
(1) may include	through a pipe, canal,	reasonable fee for	contravention, within	(k) fail to register a dam with a safety risk;
measures to -	sewer, sea outfall or	processing a licence	the time (being not less	(I) fail to comply with a temporary restriction on the use of water in terms of item 6 of
(a) cease, modify or	other conduit;	application, which may	than two working days)	Schedule 3; or
control any act or	(g) disposing of waste in	be waived in	specified in	(m) commit contempt of the Water Tribunal.
process causing the	a manner which may	deserving cases.	the notice or any other	(2) Any person who contravenes any provision of subsection (1) is guilty of an offence and liable,
pollution;	detrimentally impact on	(4) A responsible	longer time allowed by	on the first
(b) comply with any	a water resource;	authority may decline to	the responsible	conviction, to a fine or imprisonment for a period not exceeding five years, or to both a fine and
prescribed waste	(h) disposing in any	consider a licence	authority.	such imprisonment
standard or	manner of water which	application for the use of	(2) If the action is not	and, in the case of a second or subsequent conviction, to a fine or imprisonment for a period not
management practice;	contains waste from, or	water to which the	taken within the time	exceeding ten years
	which has been heated	applicant	specified in the notice,	or to both a fine and such imprisonment.
	in, any industrial or			

(c) contain or prevent power generation is already entitled by or any longer time the movement of way of an existing lawful allowed, the responsible process; pollutants; (i) altering the bed, water use or under a authority may -(d) eliminate any source banks, course or general authorisation. (a) carry out any works of the pollution; characteristics of a and take any other (e) remedy the effects of watercourse; action necessary to the pollution; and (j) removing, discharging rectify the contravention (f) remedy the effects of or disposing of water and recover its any disturbance to the found underground if it reasonable costs from bed and banks of a is necessary for the the person on whom the watercourse. efficient continuation notice was served; or (3) A catchment of an activity or for the (b) apply to a competent safety of people; and court for appropriate management agency relief. may direct any person (k) using water for who fails to take the recreational purposes. measures required under subsection (1) to -(a) commence taking specific measures before a given date; (b) diligently continue with those measures; and (c) complete them before a given date.

UNIVERSITY of the WESTERN CAPE

APPENDIX B

Constantia Case 1



Private Bag X16 Sanlamhof 7532, 52 Voortrekker Road Bellville 7532
Tel: 021 941 6268 Fax: 086 6204568 Email: stimelat@dwa.gov.za
Enquiries: T. Stimela Ref: 21/22/10/2/2 Erf 29, Hohenhort Avenue, Constantia Heights)

The Benjamin Family Trust PO Box 13907 Mowbray 7705

C/O Brett Carnegie Attorneys Suite 17 GB, Waverly Business Park Mowbray 7700

Tel No: (021) 447 0332 Fax No: (086) 6125774

Email No: brett@carnegielaw.co.za

Dear Sir

NOTICE TO ISSUE A DIRECTIVE IN TERMS OF SECTION 53(1)(a) OF THE NATIONAL WATER ACT, ACT 36 OF 1998 (THE "NWA"): UNLAWFUL WATER USE ("THE ACTIVITIES"), ON ERF 29,HOHENHORT AVENUE, CONSTANTIA HEIGHTS ("THE PROPERTY")

As a result of a joint site inspection conducted by a official from this Department, Department of Environmental Affairs and Development Planning "DEAD&P" and City of Cape Town "the City" on 20 July 2012, this Department is of the view that you are not complying with the provisions contained in Chapter 4 of the Act, in that you have undertaken the following activities:

- 1. Impeding or diverting the flow of water in a watercourse;
- Altering the bed, banks, course or characteristics of a watercourse;on Erf 29, Hohenhort Avenue, Constantia Heights, prior to the authorisation of this activity.

Authorisation is required for the above-mentioned activities in terms of the requirements of Sections 21(c) and (i) and Section 40 of Chapter 4 of the National Water Act, (Act 36 of 1998) (NWA).

The Department has reached this conclusion as a result of the following:

- 1. A complaint from the City to this Department,
- The site inspection conducted by an official from this Department on 20 July 2012 with the Department of Environmental Affairs and Development Planning "DEAD&P" and City of Cape Town "the City",
- 3. Verification of your details on the Water Use Authorization Registration Management System (WARMS) data base.

Confidentiality Notice: The information contained in this correspondence is intended for exclusive attention of addressee. Disclosure or distribution of the information is prohibited. Please advices us immediately should you have received this correspondence in error.

Batho Pele putting people first

Department of Water Affairs • Departement van Waterwese • Muhasho wa zwa Madi • uMnyango wezaManzi • Ndzawulo ya ta Mati Lefapha la Ditaba tsa Metsi I• Kgoro ya Merero ya Meelse • Lefapha la Merero ya Metsi • LiTiko leTemanti ISebe lezaManzi • UmNyango weeNdaba zaManzi In light of the above, you are hereby afforded an opportunity to make written representations to the Department within 7 (seven) calendar days from receipt of this notice if you believe there are any compelling reasons for this Department not to exercise its powers in terms of Section 53(1)(a) of the NWA and issue a directive requiring you to:

- 1. Within (2) Two calendar days immediate effect cease all activities;
- Submit a Fluvial Geomorphology Report from an independent specialist indicating how to restore, rehabilitate the watercourse and how to mitigate the impact of the activities undertaken at the property to this Department for review and approval prior to any work being undertaken within (14) Fourteen calendar days;
- 3. Implement all the recommendations from the approved Fluvial Geomorphology Report within (30) Thirty calendar days,

All of the requirements for Erf No 29, Horenhort Avenue, Constantia in the Directive will be at your own cost.

Furthermore, please be advised that in the event that this Department issues a directive and you do not comply therewith, that this Department, in terms of Section 53(2) may carry out any works and take any necessary action to rectify the aforesaid contravention, and recover all reasonable costs incurred in doing so from you; or it may apply to the relevant court for appropriate relief.

Lastly, your attention is drawn to the fact that as the activities are being conducted without this Department's authorization as required in terms of the requirements of sections 21 and 40 of Chapter 4 of the National Water Act, (Act 36 of 1998) (NWA), that this is a criminal offence in terms of Section 151(1). Section 151(2) provides that a person who contravenes section 151(1) of the NWA is guilty of an offence and liable on first conviction to a fine or to imprisonment for a period not exceeding 5(five) years or to both such fine and such imprisonment.

We wish to make it clear that the instructions contained in this letter are made in the interest of responsible water resource management, and with a view to a co-operative resolution of the issue.

Representations must be forwarded for the attention of Mr Thanduxolo Stimela delivered to:

Department of Water Affairs: Western Cape Private Bag X 16 SANLAMHOF 7532

Fax No: 086 620 4568

Should you have any further queries, please contact the relevant official at the above number.

Confidentiality Notice: The information contained in this correspondence is intended for exclusive attention of addressee. Disclosure or distribution of the information is prohibited. Please advices us immediately should you have received this correspondence in error.

Batho Pele putting people first

Department of Water Affairs - Departement van Waterwese - Muhasho wa zwa Madi - uMnyango wezaManzi - Ndzawulo ya ta Mati Lefapha ia Ditaba tsa Metsi I - Kgoro ya Merero ya Meetse - Lefapha la Merero ya Metsi - LiTiko leTemanti ISSebe lezaMarzi - Umlwango weeNdaba zaManzi



cc:

(1) Farrel Smith
City of Cape Town

(2) Nazeema Duarte

Department of Environmental Affairs and Development Planning

Acknowledgement of receipt: Received by Mr/Ms On behalf of the company on this day of 2012, at Signature: UNIVERSITY of the WESTERN CAPE

Confidentiality Notice: The information contained in this correspondence is intended for exclusive attention of addressee. Disclosure or distribution of the information is prohibited. Please advices us immediately should you have received this correspondence in error.

Batho Pele putting people first

ng people TITST
Department of Water Affairs - Departement van Waterwese - Muhasho wa zwa Madi - uMnyango wezaManzi - Ndzawulo ya ta Mati
Lefapha la Dilaba tsa Metsi i - Kgoro ya Merero ya Meetse - Lefapha la Merero ya Metsi - LTiko leTemanti
ISebe lezaManzi - UmNyango weeNdaba zaManzi

		1.	Case Number	r2	[800] 12	
The State vers	us Bran J	Benjai	min			
On: Before: PP: Defence: Interpreter:	7 Novemb Ms. Yake Ms. Matta Mr Carneg Ms. Melapi		present		,	
First Appearar	ice:					
Prosecutor: The	charge/s agai	nst the	e accused is/a	re:)	
The Accused is in	nformed of hi	the sherr	ights to:	F	cha	الم
 Consult a Be provid Dispense 	legal Practiti led with a leg with a legal F	ioner c al Prac Practiti	of his/her cho etitioner at St oner if he/sho	ate ex e wish	pense or; es.	•
Accused also infor enalties should he	e/she be conv	eriousr icted.	iess of the of	fence :	and	
ccused understan	ds and elect_				,	
) - Ce-	2-4-6					_
Cent	See	しら				
onlinación)	-13				_
) \ \						

IN THE MATTER BETWEEN

THE STATE

AND

Brian Benjamin

The accused is charged with the following:

Contravention of s 151 (1) (a) of the National Water Act read with Regulation 3 of GNR 1352 published in Government Gazette 20606. The allegation is that the accused used water otherwise than as permitted in the National Water Act, without having applied for authorisation beforehand, and failed to register such use with the Department of Water Affairs. The activities that were deemed to be water uses were listed in terms of s 21(c) and (i) in Chapter 4 of the National Water Act namely impeding or diverting the flow of water in a watercourse and altering the bed, banks, course or characteristics of a watercourse. The accused had diverted an unnamed watercourse into a PVC pipe on the property in order to commence with building activities on the property. The intention behind this was to keep the water free from building debris. The City of Cape Town received a complaint from the neighbour, Mariola Negrine. The City then informed the Department of Water Affairs and the Department of Environmental Affairs and Development Planning. A joint site inspection was conducted by all three parties. The inspection confirmed what had been reported and further that the water use had not been registered on the Water Use Registration Management System.

Subsequent to this, a notice to issue a directive in terms of s 53 (1) of the National Water Act 36 of 1998 was issued to the trust. This was done on the 6 August 2012 and the trust was given 7 days to lodge representations. The notice contained conditions to the effect that the trust was to cease all activity within two days of receipt of the notice, submit a fluvial geo-morphologist report from an independant specialist which contained guidelines as to how to restore, rehabilitate the watercourse and mitigate the impacts caused, and further to then implement these recommendations within 30 days. The trust duly complied with the above and responded within 7 days to the Dept. Included in the representations was an Environmental Management Plan on how to rehabilitate and restore the area. The Dept then failed to respond to this, and also failed to inform the trust that they intended to institute prosecution against them.

We as the prosecution have decided that it would be in the best interests of all concerned if we brought the matter to a conclusion by mediating the case, as opposed to prosecuting the accused. Our reasoning is that the failure of the Dept to respond to representations made by the accused resulted in the administrative process being flawed. Further, even if the Dept had agreed to the plan submitted, they feared that the process would trigger listed activities under NEMA. The safest option then for all concerned was to have the matter mediated in terms of the criminal process and have the plan implemented as part of the mediation agreement and the accused then be ordered to comply with the mediation agreement.

It follows then that what follows hereunder are the conditions of the mediation agreement as agreed to by all parties:

An Environmental Management Plan will be submitted by Khula Consultants on behalf of the
accused to the Dept be implemented and completed within 120 days (4 months). The work will
be conducted with due regard to the recommendations made by the fluvial geo-morphologist

Mark Roundtree and once completed will be subject to inspection by the DWA, DEAD&P, and City of Cape Town. A report will then be brought to us detailing the stakeholders satisfaction or lack thereof. Should the work not be in conjunction with the recommendations made by the fluvial geo-morphologist; or any of the proposed ideas in the plan submitted not be complied with, we reserve the right to re-institute proceedings.

- 2) Should any further development be proposed on the bed and banks of the watercourse in future, the administrator of the trust will submit a formal application for authorization of such activity before commencement of such activity to the Dept of Water Affairs.
- 3) The trustees shall voluntarily sponsor in the sum of R20 000 per year for a period of three consecutive years, the research of a deserving South African student registered in the Environmental Management Dept at the University of Cape Town the research is primarily to be in the realm of development on the bed and banks of a watercourse.
- 4) In addition, the following conditions apply to the research:
 - The research is to be primarily conducted at the property in question, but shall not be limited to this property. The research will also take into account past and present research already conducted in the area.
 - The student shall work under the instruction of DWA or the Water Research Commission.
 - The money shall be paid to and administered by Brett Carnegie in his capacity as the administrator of the trust, and he shall determine in his sole discretion the student eligible for the above sponsorship. This power shall pass to Mr Carnegie's successor in the event one is appointed for whatever reason.
 - Money may be awarded to the same student more than once and shall be paid annually to UCT every year for three consecutive years on or before 31 January commencing in 2013.
 - Any research, written or otherwise, including a thesis that is generated by the student shall be made public to the trust, DWA and the public. Said research or thesis shall bear the name of the trust as having sponsored the research.
- 5) The original complainant in this matter, Ms Mariola Negrine has been contacted and has stated that she wishes no compensation for the damages suffered by her due to the flooding of her property caused by the activities undertaken by the trust.

6) It is agreed that if the accused complies with his obligations set out herein then the accused shall not be liable for any damages beyond the boundary which will then become the responsibility of the City Council.

Accused:

Mr Brian Benjamin

Prosecutor:

Shaina Naidoo

Witness:

Mr Brett Carnegie

CLER: 10 HE CREMINAL SECTION

2012 -11- 0 9

WYNBERG COURT

CRIMINAL SECTION

APPENDIX C

Constantia Case 2



Private Bag X16 Sanlamhof 7532, 52 Voortrekker Road Beliville 7532
Tet: 021 941 6111 e-mail: mowzera@dws.gov.za
Enquiries: A Mowzer Ref: 21/22/10/2/2 P Baise

Mr Paul Baise Erl 837 WITTEBOOMEN CONSTANTIA 7806

Dear Sir

DIRECTIVE IN TERMS OF SECTION 53(1)(a)OF THE NATIONAL WATER ACT 1998, (ACT 36 OF 1998)(NWA)("THE ACT"): UNLAWFUL WATER USE ("THE ACTIVITY"), ON ERF 837, WITTEBOOMEN, CONSTANTIA ("THE PROPERTY")

- This Department's Notice to issue a Directive dated 27th February 2019 read with your written representations dated 13 March 2019 have reference.
- Pursuant to the perusal of your representations and the reasons contained in our Notice to issue a Directive. Your written representation are not compelling insofar as to the followings grounds:
 - 2.1. No records of water usage could be produced, upon request by the Department:
 - 2.2. We are in possession of evidence that you are transferring water to other properties by means of 1000 Litra Tanks or Trucks.
- You are hereby directed in terms of Section 53(1) of the NWA to undertake the following measures and comply with the following requirements in connection with such measures:
- 3.1. Insofar as you authority to continue with Existing Lawful water use, you are Prohibited to transfer water out your property to other properties by any means such as 1000 Litre Tanks or Trucks.
- 3.2. Ceese to take water from unnamed tributary in Diep River by any means within (2) two calendar days, other than Schedule One.
- 3.3. Install recording or monitoring devices to monitor abstractions and storing use of water; and keep records on the abstractions and storing, and submit the records to the Department on a monthly basis until directed otherwise; or upon inspection by our official's.

All of the requirements for Erf 837, Witteboomen, Constantia, in the Directive will be at your own cost.

Records must be submitted by means of emails mowzera@dws.gov.za as from 29th March 2019 for inspection.

Confidentially Notice: The information contained in this correspondence is intended for exclusive attention of addressee. Disclosure or distribution of the information is prohibited. Please advices us immediately should you have received this correspondence in error.

- 1

- In relation to the above Directive, please take due cognisance of the following:
- 4.1 Failure to comply with this directive is an offence in terms of Section 151(1)(d) of the NWA:
- 4.2 Section 151(2) of the NWA provides that a person who contravenes section 151(1) of the NWA is guilty of an offence and liable on first conviction to a fine or to imprisonment for a period not exceeding 5(five) years or to both such fine and such imprisonment.
- 4.3 In terms of Section 53(2) this Department may carry out any works and take any necessary action to rectify the aforesaid contravention, and recover all reasonable costs incurred in doing so from you; or it may apply to the relevant court for appropriate relief; and
- 4.4 You are hereby also informed that this Department may publish a press release informing members of the public in relation to the prohibition of your water use
- Insofar as no substantive progress has been made in connection with the requisite measures by 3"April 2019, this Department may elect to purse the remedies available to it in terms of the provision of the NWA, including criminal action.
- Please note that even if you lodge an appeal with the Water Tribunal you are still required to comply with the instructions set out in this Directive pending the outcome of the appeal. The address is as follows:

The Acting Registrar Water Tribunal Mr Robert Mabe Private Bag X316

PRETORIA 0001

Tel No. (012)336 6825

Fax No. (012)336 6799 E-mail: MabeR@dws.gov.za

We wish to make it dear that the instructions contained in this directive are made in the interest of responsible water resource management.

Should you have any further queries, please contact the relevant official at the above number. UNIVERSITY of the

WESTERN CAPE

Yours faithfully

REGIONAL HEAD: WESTERN CAPE

Mr RASHID KHAN

DATE: 2 D MAR 2019

Confidentiality Notice: The information contained in this correspondence is intended for exclusive estention of addresses. Disclosure or distribution of the information is prohibited. Please advices as immediately should you have received this correspondence in error.

-2-

APPENDIX D Philippi Case



Private Bag X16 Sanlamhof 7532, 52 Voortrekker Road Beltville 7532 Tel: 021 941 6111 Email: mowzera@dws.gov.za Enquiries: A Mowzer Ref: 05/2014 – Oakland Dairy

Oskland Dairy 669 Weltevreden Road PHILLIPI 7750

Per Email; banker.mac@icloud.com

Attention: Mr Jan van Niekerk

Dear Sir

NOTICE OF INTENTION TO ISSUE A DIRECTIVE IN TERMS OF SECTION 19(3) OF THE NATIONAL WATER ACT, ACT 36 OF 1998 (NWA)("the ACT"):NON-COMPLIANCE REGARDING WASTE DISCHARGE AT DAKLAND DAIRY ("THE ACTIVITY"), AT SOUTH FORK INDUSTRIAL SITE ("THE PROPERTY") DISTRICT PHILLIPI.

The above-mention matter has reference.

Following a site inspection dated on 16 May 2016, the Department is of the opinion that you are in breach of the pollution prevention provisions of Section 19(1) and (2) of the National Water Act (No. 36 of 1998)("NWA") and Section 24 of the constitution of South Africa (Act 108 of 1996). These Sections state that:

"s 19. (1) An owner of land, a person in control of land or a person who occupies or uses the land on which - TATE CONTROL TO A TOTAL

(a) any activity or process is or was performed or undertaken; br.

(b) any other situation exists, which causes, has caused or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.

s19. (2) The measures referred to in subsection (1) may include measures to:-

(a) cease, modify or control any act or process causing the pollution;

(b) comply with any prescribed waste standard or management practice;

(c) contain or prevent the movement of pollutants;

- (d) eliminate any source of the pollution;
- (e) remedy the effects of the pollution; and
- (f) remedy the effects of any disturbance to the bed and banks of a watercourse."

a24 of the constitution of the Republic of South Africa states the following:

Environment. Everyone has the right-

 (a) to an environment that is not hermful to their health or well-being; and (Issue No 32) 125 1

88. 24 - 25 No. 108 of 1996 ss. 24 - 25

(b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-

(i) prevent pollution and ecological degradation:

(ii) promote conservation; and

(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Accordingly, this section of the Act imposes this responsibility on you.

The Department's opinion that you have failed to take such reasonable measures is based on the following findings and information:

- 1) A formal public complaint to this office.
- A joint site inspection conducted by DWS and City of Cape Town on 16 May 2016 with the following findings:
 - The waste water flows directly to the open field at entrance to South Fork industrial Site

Please note that the discharge of untreated effluent to the field poses a serious health risk, damages the environment. The Department is of the opinion that you have failed to take the measures required of you in ferms of Section 19(2) of the NWA, you are hereby afforded a period of ten (10) calendar days from receipt of this letter to provide us with reasons as to why we should not issue a Directive in terms of section 19(3) of NWA which will require you to:

- Submit the scope and programme of the pollution prevention at the South Fork Industrial Site within twenty (20) working days; inclusive of City of Cape Town recommendations that you dispose of the waste water at the Borchards Quarry WWTW and the feasibility of connecting the Dairy to the nearest sewer point since no municipal infrastructure exists in the area
- Submit a copy of the EIA and Water Quality Management Report of Oakland Dairy (process of the farm activities) to this Department on a monthly basis.
- Water measuring devices must be installed at the final effluent discharge irrigation area and records must be kept on a monthly basis.
- 4. Within twenty (20) working days submit a plan outlining the remediation works. The plan must be detailed in actions and timeframes which are measurable and can be monitored. The plan must outline:

- A short term plan. This plan should indicate the most important/crucial activities which should be initiated to address the waste water discharge problem.
- A long term plan. This plan should indicate what the management of Oakland Dairy will put in place to ensure it complies with national regulations, including mechanisms to prevent future non-compliance.
- A monitoring programme to monitor the water quality and report on it, and progress of the remediation plan on a bi-monthly basis.
- iv. A plan to address sustainability issues such as the operation and maintenance of the diary, specifically of waste water discharge and water monitoring requirements.
- 5. Furthermore, please be advised that in the event that this Department issues a Directive and you do not comply therewith, that this Department, in terms of Section 53(2) may carry out any works and take any necessary action to rectify the aforesaid contravention, and recover all reasonable costs incurred in doing so from you; or it may apply to the relevant court for appropriate relief.
- 6. Your attention is drawn to the fact that if the activities are being conducted without this Department's authorization as required in terms of the requirements of sections 21 and 40 of Chapter 4 of the National Water Act, (Act 36 of 1998) (NWA), that this is a criminal offence in terms of Section 151(1). Section 151(2) provides that a person who contravenes section 151(1) of the NWA is guilty of an offence and liable on first conviction to a fine or to imprisonment for a period not exceeding 5(five) years or to both such line and such imprisonment.
- We wish to make it clear that the instructions contained in this letter are made in the interest of responsible water resource management, and with a view to a cooperative resolution of the issue.
- Should you have any further queries, please contact the relevant official indicated above.
- Representations must be forwarded for the attention of Adv. Abraar Mowzer and delivered to: UNIVERSITY of the

Department of Water and Sanitation: Western Cape

Private Bag X 16

SANLAMHOF

7532

Yours faithfully

DIRECTOR: REGULATIONS: WESTERN CAPE

Signed by: Adv. Abraar Mowzer

Dated: 27 May 2016

APPENDIX E Mfuleni Case



Claic Carries 12: Hertzeg Boulevard Cape Town 9001 P O Box 16646, Vlandweg 8015 Ault Fort K Wilseman

Tel: (821) 487-2285 Fac: 8231 487-2385

E-molt teithreisemen@cepelown.pov.ze Weeknalt http://www.cepelown.gov.ze toko feluntu 12 Hertog Routovard Cape Town 800. P.O Sox 16546, Vlasberg 9818 Cela: K Whantan

Cela: K Wasman Umrasha: (CC) 487-2965 Seks: (CC) 487-2965 CAM, 2,183 N Burgersettum Heckog-boulevard 12 Koppha 5001 Podos 1848, Vactory 9018 Vas dt 1848 et al. 1848 Tal. (001) 417-2200

Folia: (021) 467-2255

STRATEGY AND PLANNING -ENVIRONMENTAL RESOURCE MANAGEMENT -

27 July 2011

The Chief Director: Western Cape Department of Water Affairs Private Bag X 16

Fax: 086 620 4568

Sanlamhof 7532

Email: stimelat@dwa.gov.2#

Attention: Mr T. Stimela

Non-compliance notice in terms of Section 19(1) of the National Water Act 36 of 1998: Infilling and dumping of waste on Erf 1 (84-1-2) Mfuleni, Cape Town

Reference is made to your Notice (dated 11 May 2011, Ref 21/22/10/2/2), the City's responses dated 25 May 2011 and 30 May 2011, and your subsequent letter dated 22 June 2011.

The last mentioned correspondence requested the City to respond on two issues: 1) the provision of services as indicated in our letter of 25 May 2011; and 2) the process to remedy pollution of the watercourse on Erf 1 Mfuleni.

With regard to the provision of services, please be advised that the City has not entered into a lease or other agreement allowing residential use of the land in question. It has been determined that a Mrs Matyolo has illegally constructed four galvanised zinc structures on the land in question. These structures are possibly being used as sleeping quarters for workers and other uses. The City's Property Management Department is investigating this alleged illegal occupation with a view to initiating eviction proceedings. In the meantime, I am informed that the informal settlement in the area is provided with basic services in terms of the City's Informal Settlement Master Plan.

With regard to point 2) above, the City served a Directive on Ross Demolition in terms of Section 31A of the Environment Conservation Act 73 of 1989 on 8 June 2011. A response to this Directive was received from Smith Tabata Buchanan Boyes Attorneys (STBB), on behalf of Ross Demolition, dated 23 June 2011. A similar letter was received by your office. STBB allege in that letter that Mrs Matyolo had or would have denied Ross Demolition access to the property for the purpose of removing the dumped material.

The City is therefore in the process of issuing a warning letter to Mrs Matyolo, advising her that the construction of structures, infill and dumping was illegal and that the City requires rehabilitation of the area. The City is responding to STBB and Ross Demolition by emphasising that the City is the owner of the land and that the land is illegally occupied. The City will direct Ross Demolition to undertake rehabilitation of the wetland and to fulfil the requirements of the Section 31A Directive of 8 June 2011. Failure to comply with such a Directive is an offence and may be referred for prosecution.

Your on-going interest in this matter is welcomed in the spirit of cooperative governance.

Achmat Ebrahim City Manager

Copy to:

Director: Environmental Compliance & Enforcement

Department of Environmental Affairs and Development Planning

Dr Eshaam Palmer

Fax 021 483 2797



Marris No. 204, Place 2 Secondo Secondo (G. Roma) et excessive Te Presidente 7784 Private Deg /50 Eulere 7575 Ass for: Nr AAN Forber

Tai, 901 360 1134 Fee: 080 1346 135

Emplications ha entritle tipp: name agentium private Ref (CEARTH) Forkalte: Senten TM-Dischoo Ett 1 Miles

Rater to 304, Voca 1 Stocks & Stocks of Hubbl for Stocks Waterston 1794 Processe NSI, Scholle 1975 YOU HE BOY MAKE FAIRBAN Tel 301 100 1104 Pres. TITL 1244 001

STRATEGY AND PLANNING —Environmental Resource Management Environmental Associated Resource

To: Ross & Sons (Pty Ltd) T/a Ross Demolition P. O. Box 179 Woodstock 7915 Tet 021 511 1204/5

C/o Mr R Ross

8 June 2011

BY HAND

Dear Sir

DIRECTIVE IN TERMS OF SECTION 31A THE ENVIRONMENT CONSERVATION ACT,

RE: INFILLING INTO THE FLODDPLAIN OF THE KUILS RIVER, ERF I MFULENI

RECORDAL

Following the Notice of Intention (NOI) to issue a Directive in terms of section 31A of the Environment Conservation Act. 73 of 1989 (ECA) served on you by the City of Cape Town (the City) on 11 May 2011, it is recorded that written regresentations were not submitted to me by 19 May 2011 as to why you should not be issued with a Directive in terms of section 31A of the ECA.

A site meeting was held between the Environmental & Heritage Management (E&HM) Branch of the City, the Department of Water Affairs (DWA) and a representative from the contractor HBWO on 13 May 2011 to investigate the site. Another site meeting between the E&HM Branch and the Biodiversity Management Branch from the City took place on 23 May 2011 to ascertain the extent of the dumping. It is recorded that it is still the City's reasonable opinion that the activities on Erf 1 Mfuleni have resulted or may result in the environment being seriously damaged, endangered or detrimentally affected, in that the placing and dumping of material other than storm water into the floodplain of the Kuils River has caused or may cause the following:

- an increase in flood levels or a potential flood risk as the material has been placed within the 1:100 year flood plain of the river
- . a threat to aquatic life in the river
- · permanent loss of the wetland

SECTION 31A DIRECTIVE

Having regard to all the abovementioned factors as well as the environmental principles contained in the National Environmental Management Act, 107 of 1998 (NEMA), I, Azenne van Wyk, Head: Environmental & Heritage Management Branch (Eastern Region), acting on behalf of the City, hereby issue a Directive in terms of section 31A of the ECA and direct you, in terms of sections 31A(1) and (2) of this Act to undertake the following measures as directed and within the following time frames:

1. With immediate effect, you are:

To cease further placing or dumping of material into the floodplain of the Kuils River.

- 2. Within 30 days of receipt of this Directive, you are to take the following steps, at your own expense, with a view to aliminate, reduce or prevent the damage, danger or detrimental effect to the environment, as a result of your abovementioned activity, to my satisfaction:
 - Surveying and demarcating the 1:100 year flood line for future management.
 - To engage the services of an environmental specialist to evaluate impacts of the activity on the river and to recommend what work is required to rehabilitate the environment. This report must include a Method Statement, which must contain at the procedures to be followed and indicate the dumping site to which removed material will be taken.

2.3 To submit the said specialist report to the City for review and approval by the

E&HM Branch prior to any removal work commencing

- Following approval from the E&HM Branch to remove the soil, general rubble and fill that were placed within the topoplain of the Kulls River to a point where the original ground level is revoked, to the satisfaction of the E&HM Branch.
- To rehabilitate the erf to its original state in accordance with the recommendations of the environmental specialist.

To carry out sught work to the satisfaction of the E&HM Branch and under the supervision of the environmental specialist.

To submit the environmental specialist's verification that the necessary work has been done, to me.

On completion of the above requirements a joint inspection by yourself, representatives of the E&HM Branch and the Roads, Stormwaler and Catchment Management Branch of the City, and DWA is to take place to confirm whether all the instructions as required above have been complied with in all matchal respects and to determine if the objectives of this Directive have been achieved.

In addition, please be advised that in the event that you do not comply with this Directive, the City may:

- In terms of Section 31A(3), perform the required activities or functions, or authorise any person to take the steps required for that purpose;
- . In terms of Section 31A(4), recover all expanditure incurred by the City in this regard from you.

Furthermore, non-compliance with a Directive issued in terms of Section 31A is a criminal offence in terms of Section 29(3) of the ECA and may therefore be referred for prosecution. It is further a criminal offence in terms of Schedule 3 of NEMA and accordingly attracts penalties as provided for in that Act.

The City reserves its right to take such further action as it deems necessary should you fall to respond to this Directive or further threaten Erf 1 Mfuleni, the river, the floodplain or surrounding environment.

You may contact Alexander Forbes on telephone 021 360 1124 or fax 086 624 8526 or via e-mail at alexander forbes@capetown.gov.za if you have any queries.

Yours faithfully

AZANNE VAN WYK

7.6.2011

DATE

HEAD: ENVIRONMENTAL & HERITAGE MANAGEMENT (Eastern Region)
ENVIRONMENTAL RESOURCE MANAGEMENT DEPARTMENT

CC: Dr Eshaam Palmer

Director: Environmental Compliance & Enforcement

Department of Environmental Affairs and Development Plaining

Fax: 021 483 2704

Email: Eshaam baimer@pgwc.gov.za

CC: Ms Farah Abrahams

Deputy Director: Environmental Compliance & Enforcement Department of Environmental Affairs and Development Planning

Fax: 021 483 2797

Email: Farah.Abrahams@pgwc.gov.za

CC: PL Gasa-Lubelwana

Director: Water Sector Support: R SITY of the

Department of Water Affairs

Western Cape Regional Office

Fax 08681813VV ESTERN CAPE

CC: Thanduxolo Stimela

Department of Water Affairs: Western Cape

Fax: 086 620 4568

Email: stimelat@dwa.gov.za

CC: Linda Ndlefa

Head: Environmental Management Systems and Audit

Environmental Resource Management

City of Cape Town Fax: 021 487 2266

Email: linda.ndiela@capetown.gov.za

•	LANDDROS (SI KUILSAW					
IN THE MAGISTRATE'S COURT FOR THE DISTRICT	OF KUILSRIVER 012 -10- 2 4					
HELD AT KUILSRIVER	GISTRATE (CIVIL					
	CASE NO: 5628/2012					
In the matter between:						
CITY OF CAPE TOWN	Applicant					
and						
LULUMA LORRAINE MATYOLO / DUBE	First Respondent					
Identity Number: 550209 0835 083 and all who hold						
MELUMZI FIHLA and all who hold title under him	Second Respondent					
THOSE PERSONS OCCUPYING PORTION 2 OF TH	HE REMAINDER Third Respondent					
OF ERF 1 MFULENI AND WHO ASSOCIATE THE						
THE ACTIONS OF THE	AND FOURTH					
RESPONDENTS and all who hold title under them						
ROSS & SONS (PTY) LTD t/a ROSS DEMOLITION	Fourth Respondent					
THE MINISTER OF ENVIRONMENTAL AFFAIRS AN DEVELOPMENT PLANNING, PROVINCE OF THE W	Fifth Respondent					
THE NATIONAL MINISTER OF WATER AFFAIRS						
DEED OF SETTLEMENT						

CANE

OF

WHEREAS the Applicant instituted an application against the First to Fourth Respondents for the various relief sought under case no. 5628/2012, inter While Reder to remove the fill unlawfully placed at portion 2 of Erf 1 Mfuleni ("the property") and rehabilitate the area and to remove all the structures, livestock, materials etc and to evict the First to Third Respondents from the property.

WHEREAS the Applicant has settled the question of, inter alia, removal of the infill and rehabilitation with Fourth Respondent in terms of a deed of settlement which was made an order of court on 12 September 2012.

WHEREAS the Applicant and First and Second Respondents have reached agreement and wish this agreement be made an order of court.

NOW THEREFORE the Applicant and First and Second Respondents agree as follows:

- This agreement shall be made an order of court.
- 2. The First, Second and Third Respondents shall vacate the portion 2 of Erf 1 Mfuleni
 3
 ("the property") on which First Respondent currently occupies and farms on or by 30
 Nevember 2012 ("date of vacation"). STTY of the
- First Respondent will demolish all of the structures at the property and remove all materials, goods, possessions and movable assets thereon on the date of vacation.
- First Respondent will also remove all livestock from the property on the date of vacation.
- First Respondent, consents to Fourth Respondent appointing a suitably qualified and experienced Independent Environmental Assessment Practitioner and undertaking all the work that Fourth Respondent has undertaken to do, at their cost, in terms of the

(SIVIELE HOF)

settlement agreement between Applicant and Fourth Respondent which was made an order of court on 12 September 2012. First Respondent shall do all things necessary to assist the Fourth Respondent and Independent Environmental Assessment Practitioner in carrying out the obligations set out in the order of 12 September 2012.

- 6. First Respondent is, after she has vacated the property, interdicted and restrained from reoccupying same or farming thereon, other than as set out herein. She is furthermore interdicted and restrained from residing at or allowing others to reside at, erecting structures or infilling on any portion of portion 2 of Erf 1 Mfuleni.
- Each party will pay its own costs relating to this application.
- 8. The parties agree that should the First to Third Respondents fail to vacate the 31 becenture.

 Yes property by 30 Nevember 2012, the sheriff of the above Honourable Court will be authorised to evict them, remove all the structures, the materials and possessions which, if not immediately claimed by the owners, will be disposed of by the Applicant.
- 9. Applicant notes that the Mfuleni Small Farmers Association can temporarily accommodate First Respondent's farming activities at another portion of the Portion 2 of Erf 1 Mfuleni. The First Respondent agrees to only farm at the portion of the property at which the Mfuleni Small Farmers Association can accommodate her until the City has reached a decision regarding the regularising of urban agriculture on the property (i.e. the pending lease application by the Mfuleni Farmers Association in respect of the property).
- 10. The temporary accommodation of the First Respondent's farming activities shall not create any legitimate expectation on the part of the First Respondent or the Mfuleni Small Farmers' Association in respect of the long term use of the property or any rights to the property.

11. The portion to be temporarily farmed by First Respondent has been shown to and agreed upon by the Applicant and is within the area already farmed and which forms part of the application for lease by the Mfuleni Farmers Association (the co-ordinates of the site are 34.00905S 18.67651E). In the event that the said lease is not granted by the Applicant or in the event that the first respondent is not entitled to the property in tegms of the lease, the

Applicant will advise her of such decision accordingly.

DATED AT CAPE TOWN

ON THIS 23RD DAY OF OCTOBER 2012



DATED AT BELLVILLES TON THIS & T DAY OF OCTOBER 2012

AS WITNESSES:

1.

FIRST AND SECOND RESPONDENTS'
ATTORNEYS (MR NGCULU)

2.

LANDDROS (SIVIELE HOF)

RULLS RIVER

MAGISTRATE (CIVIL COURT)

APPENDIX F

Court outcomes achieved by the Department of Water & Sanitation

22 Oct 2019 Cape Times DOMINIC ADRIAANSE dominic.adriaanse@inl.co.za

Farm owners fined millions over misuse of water

Blue Scorpions keep things in check

SEVERAL Western Cape farm owners have been slapped with hefty fines for water crimes.

The cases were investigated by the Department of Water and Sanitation (DWS) unit Blue Scorpions, which probes water-related crimes.

In Vredendal Tierhoek Boerdery was fined R3.5 million after it faced 11 criminal charges, of which six related to water and five to environmental transgressions.

They were found guilty of unlawfully and intentionally failing to comply with the National Water Act by storing water without authorisation, and failing to register and to submit an application to register dams with a safety risk within 120 days.

Suiderland Plase Boerdery negotiated a R1m out of court settlement, which will be translated into one vehicle for enforcement enhancement activities by the DWS, while Sigma Boerdery in Clanwilliam was fined R500 000 for transgressions.

Sigma, Tierhoek and Suiderland Plase Boerdery did not respond to the Cape Times' requests for comment by deadline.

"Given that water is a catalyst for growth and development of our country, at this department we cannot afford to turn a blind eye to water transgressions. We appeal to all water users to act in a responsible manner and respect the use of water during this drought period. We wish to express our gratitude to all those water users who continue to act in a responsible manner. This not only improves water security and quality but upholds the integrity of the environment in the Western Cape," the DWS said. Agri Western Cape chief executive Jannie Strydom said: "Given the critical state of our province's water resources, Agri Western Cape commends the Blue Scorpions on their zero-tolerance approach when it comes to water-related crimes. Any person who violates any law of the country should be prosecuted." AgriSA head of natural resources Janse Rabie said: "AgriSA recently recommitted itself to supporting any and all initiatives towards ensuring that water use by AgriSA's affiliated members are lawful in accordance with the NWA and that the illegal use of water is not tolerated." THE National Water Act (No 36 of 1998) advocates for water to be developed, used, conserved, protected, and to be controlled in a sustainable and equitable manner. South Africa has low levels of rainfall relative to the world average, with high variability and high levels of evaporation due to the hot climate, and increasing challenges from water pollution. South Africa is the 30th driest

country in the world and has less water per person than countries widely considered to be much drier, such as Namibia and Botswana. Against this background, it becomes critical to implement compliance and enforcement. The Department of Water and Sanitation's (DWS) Blue Scorpions is the DWS inspectorate wing responsible for investigating and prosecuting water related crimes, as per the National Water Act. The Western Cape Blue Scorpions have been hard at work, investigating and referring water crimes to relevant law enforcement agencies, such as the South African Police Services and the National Prosecuting Authority. Some of the cases that were successfully prosecuted in the past few years include:

- 1. Imposing a hefty fine of R20 000 on a Breedevalley farmer, who constructed an illegal dam.
- 2. In 2015, a case (case number: 6849) in Worcester, in the BGCMA area, a farmer paid a R10 000 fine in the Worcester Regional Court and this was paid into the bank account of BGCMA.
- 3. In 2016, in a case in the Blue Downs Regional Court, Ross Demolition Pty Ltd was fined R500 000, which translated into two vehicles, for enforcement enhancement activities.
- 4. Last year, the department developed and led a joint enforcement operation, saving people of the West Coast from drought, as their Misverstand dam was running dry.
- 5. In 2018/19, in a case (number: VSH47/18) in Clanwilliam Regional Court, Sigma Boerdery was fined R500 000.
- 6. In 2018/19 in a case (number: 40/3/18), in Vredendal Regional Court, Tierhoek Boerdery was fined R3.5 million.
- 7. This year, we successfully negotiated the following out of court settlements:
- 7.1. ALG Boerdery and the transgressor (farmer) paid R60 000 into the department's account;
- 7.2. WP Dreyer Trust and the transgressor (farmer) paid R200 000, which translated into equipment and promotional gear for enforcement enhancement activities;
- 7.3. Suiderland Plase Boerdery and the transgressor (farmer) paid R1 million, that will be used to buy one vehicle for enforcement enhancement activities.

Given that water is a catalyst for growth and development of our country, the department cannot afford to turn a blind eye to water transgressions.

The department appeals to all water users to act in a responsible manner and respect the use of water during this drought. As the department, we wish to express our gratitude to all responsible water users. This not only improves water security and quality, but upholds the integrity of the environment in the Western Cape.