
GENERAL NOTICES • ALGEMENE KENNISGEWINGS

**DEPARTMENT OF WATER AND SANITATION
NOTICE 70 OF 2016****DRAFT NATIONAL SANITATION POLICY**

I, Nomvula Paula Mokonyane, in my capacity as Minister of Water and Sanitation hereby give notice of intention, to publish the draft National Sanitation Policy, as contained in the schedule hereto, for the purposes of comment and consultation with interested and affected parties.

Members of the public are invited to submit to the Minister, within 30 (thirty) days after the publication of the notice in the gazette, written comments or inputs to the following addresses:

By post to:

The Director-General
Department of Water and Sanitation
Private Bag X 313
Pretoria
0001

By hand at

Department of Water and Sanitation
185 Francis Baard Street, Sedibeng
Building, Room 914, Pretoria
0001

Marked for the attention: **MR ANIL SINGH-DDG: WATER SECTOR REGULATION**

By email: SinghA3@dws.gov.za or by fax to (086 561 4745) or
Alternative email: BrisleyM@dws.gov.za or by fax to (086 216 9765)

All enquiries in connection with the draft National Sanitation Policy can be directed to Mr A.B Singh at (012 336 7360) or Ms M.E Brisley at (012 336 8768)

Comments received after the closing date may not be considered.



NP Mokonyane
Minister of Water and Sanitation



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

14 January 2016

DRAFT NATIONAL SANITATION POLICY 2016



SECRET

Contents

1	Introduction	1
2	Sanitation Services Principles	3
3	Sanitation Definitions	5
4	Equity Policy Positions	8
4.1	Position 1: Sanitation in human settlements	8
4.2	Position 2: Free Basic Sanitation	9
4.3	Position 3: Sanitation Service provision on privately owned land	10
4.4	Position 4: Sanitation Services for backyard dwellers	12
4.5	Position 5: Sanitation Services to Informal Settlements	13
4.6	Position 6: Emergency Sanitation	15
5	Institutional Policy positions.....	16
5.1	Position 7: Sanitation at public institutions.....	16
5.2	Position 8: Bulk Sanitation Infrastructure and Establishment and Functions of Regional Water and Sanitation Utilities.....	17
5.3	Position 9: Integrated planning of Sanitation	18
5.4	Position 10: National Water and Sanitation Advisory Committee.....	19
5.5	Position 11: Enforcement of Sanitation Regulations.....	20
6	Sustainable Sanitation Policy Positions	22
6.1	Position 12: Hygiene Education and End-user Education.....	22
6.2	Position 13: Grey water management in sanitation service provision.....	23
6.3	Position 14: Reduce, reuse, recycle, recover and reclamation in the sanitations sector.....	24
6.4	Position 15: Effluent management	25
6.5	Position 16: Operation and Maintenance	27
6.6	Position 17: Appropriate Sanitation Technologies	28
6.7	Position 18: Economically and Financially Sustainable Sanitation.....	29
6.8	Position 19: Water Stewardship in the Sanitation Sector	29
7	Way forward	Error! Bookmark not defined.
8	References	30

SECRET

1 Introduction

It's not all about flushing

"We must introduce new technologies that appreciate that water is a scarce resource and as such provide solutions to dispose of effluent via alternative methods. It's not all about flushing"...."We must begin by challenging the property development sector through regulation and licensing requirements to invest itself in developing properties less reliant on water for sanitation in order to ensure we introduce the alternative solutions to low, middle and high income areas"

The Minister of Water and Sanitation, Ms. Nomvula Mokonyane, National Sanitation Indaba (DWS, 2015)

Sanitation is a public good – while sanitation is an intensely private social sphere of the water value chain, it is also a public good with environmental and health protection benefits accruing well beyond the household boundary. Addressing backlogs in access to sanitation is thus through holistic public interventions.

The sanitation sector is currently regulated by three policy documents, namely the White Paper on Water Supply and Sanitation (1994); the White Paper on a National Water Policy of South Africa (1997) and the White Paper on Basic Household Sanitation (2001). These policy documents provide a suite of procedures, rules and allocation mechanisms for sanitation in the country, which are implemented through the policy instrument of laws and regulations; economic measures; information and education programmes; and assignment of rights and responsibilities for providing services. Implementation of the South African sanitation policy is guided by the Strategic Framework for Water Services (2003), which provides the 10 year roadmap for addressing the countries water supply and sanitation service delivery imperatives.

The Department of Human Settlements, in conjunction with sanitation partners, reviewed the above mentioned policy documents and developed the 2012 Draft National Sanitation Policy to regulate sanitation in the country. Although completed to the stage of extensive consultations, the Draft National Sanitation Policy was never gazetted as the policy for the country. The Draft National Sanitation Policy did however identify gaps in the earlier policies and addressed key areas. With the White Paper on Basic Household Sanitation focussing largely on rural sanitation and on-site systems, the Draft National Sanitation Policy of 2012 was developed to address the entire sanitation value chain.

Since the promulgation of the earlier sanitation policy documents, and based on several years of implementation, a number of challenges and unintended consequences have been identified that require a sanitation policy review, and consequent legislative amendment. The sanitation regulatory responsibilities have been unclear over this period, shifting between departments, while responsibility for implementation of these services, as required by the Constitution of South Africa (South Africa, 1996), devolving to local government. This has resulted in significant changes to the sector, requiring a review of the current policies and strategy to address gaps in current sanitation policy positions.

South Africa's developmental path has been reviewed and refined over the past 20 years. The most recent development plan for South Africa is the National Development Plan (NDP), which is implemented through the Medium Term Strategic Framework (MTSF). These developmental documents will steer the sanitation sector for the next 15 years.

South Africa is expected in future to experience increased urbanisation, placing greater challenges on urban sanitation systems. At the same time, growing and changing human settlement types in rural areas are placing increased strain on small and limited sanitation systems. Sanitation services in future will need to place greater emphasis on human settlement appropriate systems, where significant consideration of available resources such as water will be placed on sanitation system choice.

The **values** underpinning future sanitation services in the country will be to place greater emphasis on applying the principles of 'polluter pays', 'user pays' and on increasing the recognition of the economic value of sanitation, as these are crucial to sustainable sanitation services provision in this changing environment.

The policy positions addressed in this document emanate from a review of the sanitation White Papers and a review of South Africa's future developmental vision.

The policy positions outlined below address gaps in current sanitation policies, which may require legislative amendment and the policy position amendments which are needed for the sanitation sector to support South Africa's developmental vision. All policy positions in current sanitation policy (1994; 1997 and 2001) which are not highlighted in this document for amendment remain valid. The policy endorses the national sanitation targets, as outlined in the MTSF, of an *increase in the percentage of households with access to a functional sanitation service from 84% in 2013 to 90% by 2019, including elimination of bucket sanitation in the formal areas*. The policy adopts the MTSF position that *work will proceed to progressively reduce differences in access to adequate sanitation, as well as in reversing apartheid geography and strengthening the social wage. Initiatives that will enable societal engagement to improve service delivery will include promoting citizen-based monitoring of government service delivery*.

Sanitation services in South Africa acknowledges the Batho Pele principles of consultation, service standards, access, courtesy, information, openness and transparency, redress and value for money.

The Department of Water and Sanitation's mandated function in the sanitation sector is the macro planning, regional bulk services, monitoring and regulating of sanitation activities, in accordance with the Constitution. This requires the capacity to establish national policy guidelines, a national water and sanitation strategy, the authorisation of waste discharge, the formulation of conditions for State subsidies, the development and enforcement of regulations, the setting of minimum services standards as well as monitoring and regulating sanitation service provision. The Minister's roles and responsibility in sanitation, as outlined in the 1994 White Paper, 1997 Water Services Act, 2001 White Paper on Basic Household Sanitation and the 2003 Strategic Framework for Water Services, remains unchanged. The status quo is that the Minister of Water and Sanitation is responsible for national sanitation policy, regulation and coordination.

The scope of the policy include the policy positions required to support equity in the sanitation sector; to strengthen sanitation institutions and to ensure sustainable sanitation provision in the country, including positions related to:

Equity in sanitation service provision

1. Sanitation in human settlements
2. Free Basic Sanitation
3. Sanitation service provision on privately owned land
4. Sanitation provision to backyard dwellers
5. Sanitation provision in informal settlements
6. Emergency sanitation

Sanitation service provision institution

7. Sanitation at public institutions
8. Bulk Sanitation Infrastructure and Establishment and Function of Regional Water and Sanitation Utilities
9. Integrated planning of sanitation
10. National Water and Sanitation Advisory Committee
11. Enforcement of Sanitation regulations

Sustainable sanitation service provision

12. Hygiene and End-user Education

13. Greywater management in sanitation
14. Reduce, reuse, recycle, recover and reclamation
15. Effluence management
16. Operation and maintenance in the sanitation sector
17. Appropriate Technologies
18. Economically and Financially Sustainable Sanitation
19. Water stewardship in sanitation

2 Sanitation Services Principles

1. The right to access to basic sanitation

Ensuring universal access to basic sanitation is recognised as a Constitutional responsibility of the national sphere of government, with Constitution responsibility of provision of basic sanitation services at the local sphere of government. Local government must take reasonable measures to realise this right.

2. Prioritising hygiene and end-user education in sanitation service provision

Hygiene education is crucial to maximise the public benefit of sanitation service provision. Sanitation improvement must prioritise hygiene education in planning and implementation. End-user education is necessary for consumers to understand their sanitation rights, responsibility and water conservation and demand management must also be prioritised in sanitation improvement. Hygiene and end-user education must be continuous, have varying emphasis based on needs and address all geographic areas of the country.

3. Prioritising basic sanitation services to vulnerable people and unserved households

Provision of basic sanitation services must be prioritised and supported for vulnerable people and unserved households. Basic sanitation service provision to vulnerable people must accommodate the special access requirements of these individuals and households.

4. People-centred and demand-driven sanitation service provision

Provision of sanitation services must be people-centred and demand-driven. This requires that sanitation services must recognise sanitation as a right, consider consumers expectations and needs in planning and implementing sanitation services to maximise benefits to the local economy through local job creation and use of local enterprises. Decision making and control will be devolved as far as possible to accountable local structures. There is a reciprocal obligation on communities to accept responsibility for their own development and governance, with the assistance of the State.

5. Polluter pays principle

The principal of "the polluter pays" must be upheld. Any reduction of receiving water quality should have a value assigned to it and must be address through legislative processes and procedures. Water quality management shall include the use of economic incentives and penalties to reduce pollution; and the possibility of irretrievable environmental degradation as a result of pollution shall be prevented.

6. User pays principle

Beneficiaries of the water management system shall contribute to the cost of its establishment and maintenance on an equitable basis. This is a central principle to ensure sustainable and equitable development, as well as efficient and effective management. Implementation, regulation and enforcement of the user pays principle are central to sustainable sanitation service provision.

7. Sanitation has economic value

The way in which sanitation services are provided must reflect the growing scarcity of good water quality in South Africa in a manner which reflects their value and does not undermine long term sustainability and economic

growth. The public and economic benefit of improved sanitation must be recognised and valued. The economic value of sanitation by-products should be recognised and the reuse of these products encourage, particularly as a resource in energy generation.

8. Integrated development

Sanitation developments are not possible in isolation from development in other sectors. The public health benefits of improved sanitation are maximised when sanitation is planned and provided in an integrated manner with other basic services. Co-ordination is necessary with all tiers of government and other involved parties and maximum direct and indirect benefit must be derived from development in, for instance, education and training, job creation and the promotion of local democracy.

9. Equitable regional allocation of development resources

The limited national resources available to support the provision of basic services should be equitably distributed among regions, taking account of population and level of development.

10. Recognising the value of sanitation by-products

The full value of sanitation by-products needs to be fully realised and reinvested into the system so as to foster increased investments and generate efficiency gains. A stronger focus is needed on maximising recovery, use, reuse and recycling of sanitation by-products could deliver efficiency gains along the entire sanitation value chain, as the by-product would become a valuable resource instead of a cost that needs to be minimised or avoided.

11. Prioritising operation and maintenance

Every infrastructural development requires a long term sustainability plan which addresses the total life-cycle operating and maintenance requirements. Sufficient resources must be allocated to *maintain the sanitation services infrastructure and related systems adequately*. The planning of capital expenditures must also be integrated with the associated operation and maintenance requirements and expenditures.

12. Integrated waste management

Human waste is only one of a range of wastes emanating from households, including solid waste, grey water and human waste. Management of these household waste streams must be in an integrated and coordinated manner to ensure safe storage, removal and management of all household waste.

3 Sanitation Definitions

One of the key gaps in the current sanitation policies is the divergent sanitation definitions which are gazetted. New national and international developments in the sanitation sector have also resulted in new and changing sanitation definitions for various components of the sector. There is a need for policy positions to clarify these definitional uncertainties in sanitation terminology to ensure consistency in future.

The SFWS (2003) advocates that the *sanitation definitions will be revised in future once greater progress has been made in addressing the existing backlog in services provision and as affordability increases as a result of economic growth. National government will provide additional funds for the provision of basic water services in terms of any revised definition.*

Terminology	Policy Position
Appropriate Technology (AT)	<p>The application of equipment, system, tools and techniques suitable for a specific occasion or circumstance.</p> <p>Appropriate technologies are those which meet the Appropriate Technology criteria and process, as developed and authorised by the National Water and Sanitation Advisory Committee. Criteria to include safe and accessible services for children and other people with special needs</p> <p>The Minister will develop norms and standards for appropriate technology.</p>
Basic Sanitation	<p>the minimum acceptable basic level of sanitation is:</p> <ol style="list-style-type: none"> appropriate health and hygiene awareness and behaviour; the lowest cost, appropriate system for disposing of human excreta, household waste water, grey water, which considers resource constraints, is acceptable and affordable to the users, safe including for children, hygienic and easily accessible and which does not have an unacceptable impact on the environment; and a toilet and hand washing facility for each household. ensures clean living environment at a household and neighbourhood levels including supervision of defecation practices of small children
Basic sanitation facility	<p>Adjust the current definition (for example) to read: The infrastructure necessary to provide an appropriate sanitation facility which considers natural (water; land; topography) resource constraints, is safe including for children, reliable, private, socially acceptable, maintainable locally, protected from the weather and ventilated, keeps smells to the minimum, is easy to keep clean, minimises the risk of the spread of sanitation-related diseases by facilitating the appropriate control of disease carrying flies and pests, facilitates hand washing and enables safe and appropriate treatment and/or removal of human waste and wastewater in an environmentally sound manner.</p>
Basic Sanitation Services	<p>Definition amended to read: the provision of an appropriate basic sanitation</p>

Terminology	Policy Position
	facility which is environmental sustainable , easily accessible to a household and a consumer , the sustainable operation of the facility, including the safe removal of human waste, grey-water and wastewater from the premises where this is appropriate and necessary, and the communication and local monitoring of good sanitation, hygiene and related practices.
Consumer	any end user who receives water services from a water services institution, including an end user in an informal settlement (South Africa, 1997)
Community	A body of people having common interest, or living in the same geographic place under the same laws and regulations
Dense settlement	An area that has been populated by residents with a relatively high mass per unit volume such that there is little open or unoccupied space
End-user education	Is defined as ongoing consumer education on sanitation services rights, responsibilities, facility operation and maintenances; and water conservation and demand management including reduce, reuse, recycle and recover principles.
Grey water	Wastewater resulting from the use of water for domestic purposes, but does not include human excrete
Environmental Practitioner	Health Any person who is registered in terms of the Health Professions Act, as an Independent practitioner with the Health Professions Council of South Africa (HPCSA), and who is allowed to practice in terms of the regulations defining the Scope of the Profession of Environmental Health.
Free Basic Sanitation	Free basic sanitation is defined as the provision of a basic sanitation service from government at no charge to registered indigents within municipal boundaries
Hygiene	Personal and household practices that serve to prevent infection and keep people and environments clean. The conditions and practices that help to maintain health and prevent the spread of diseases.
Hygiene Education	Relates to all activities that aim to increase an individual's knowledge about issues relating to personal habits and practices that affect one's health, particularly in relation to water and sanitation services. Hygiene education includes personal hygiene, food hygiene, human waste hygiene and environmental hygiene education to change sanitation behaviours
Hygiene promotion	Systematic approaches to encourage the widespread adoption of safe hygiene practices in order to reduce diarrhoeal and other water- and sanitation-related diseases. Hygiene promotion focuses on determinants of behaviour change, which may not necessarily be directly related to knowledge of the health consequences of poor hygiene
Indigent	Indigent means "lacking the necessities of life". The definition of indigent from the National Framework for a Municipal Indigent Policy is accepted. The National Treasury definition of a 'poverty line' is also acknowledged to determine indigence

Terminology	Policy Position
Interim sanitation service	An interim measure to provide privacy to the user, be readily accessible and in close walking distance, and provide for the safe disposal of human waste. Including hygiene and end-user education.
Sanitation at public institutions	Is defined as basic sanitation service provision at to public institutions including (but not limited to) schools, academic institutions, clinics, hospitals, crèches and day-care centres, libraries, old-age homes, churches, sporting facilities, police stations and correctional facilities, and public areas and public spaces.
Sanitation	Policy definition is amended to read: "Sanitation" refers to the principles and practices relating to the collection, removal or disposal of human excreta from household, public institution, industrial, agricultural and mining wastewater, grey-water waste as they impact upon people and the environment. Good sanitation includes appropriate health and hygiene education and behaviour, hand hygiene and acceptable, affordable and sustainable sanitation services.
Sanitation service	Sanitation service definition amended to read: The collection, removal, treatment and or disposal of human excreta, and domestic public institution wastewater, and the collection, treatment and/or disposal of municipal, agricultural, mining and industrial wastewater. This includes all the organisational arrangements necessary to ensure the provision of sanitation services including, amongst others, consideration of natural resources, social acceptance , appropriate health, hygiene and sanitation-related awareness and technologies , the measurement of the quantity and quality of discharges where appropriate, apply the polluter pays principle , the associated billing, collection of revenue and consumer care. Water services authorities have a right but not an obligation to accept industrial, agricultural and mining wastewater within their area of jurisdiction.
Emergency sanitation	Sanitation services provided on a temporary basis in the short-term to address emergencies.

4 Equity Policy Positions

4.1 POSITION 1: SANITATION IN HUMAN SETTLEMENTS

Policy Positions

Reaffirming the policy position of basic services are a human right and “Some for All”, rather than “All for Some”.

Priority in planning and allocation of public funds in human settlements will be given to those who are presently inadequately served with sanitation.

Improving public health and addressing environmental standards for sanitation will be the two outcomes that human settlement areas must seek to ensure for citizens.

Sanitation in human settlement areas need to be planned and implement as part of the holistic human settlement-wide plan

Human settlement areas should aspire to 100 percent safe disposal of wastes on a sustainable basis.

Human settlement areas must raise the profile of sanitation and hygiene education

Human settlement wastewater and storm water drainage must be managed safely locally.

Recycle and reuse of treated wastewater for non-potable applications in human settlement areas should be implemented wherever possible.

Where appropriate, priority must be given to sanitation technologies which minimise use of natural resources.

The Minister will, in concurrence with the Department of Human Settlements, provide norms and standards for resource efficient sanitation infrastructure for new developments in human settlement areas.

The Minister will, in concurrence with National Treasury, provide incentives to encourage utilisation of resource efficient sanitation infrastructure in human settlement areas.

4.1.1 Problem Statement

Current sanitation policy has a strong focus on basic sanitation services and provision of these to poor households in the country. The provision of sanitation services to the non-indigent and urban/peri-urban households in the country is largely not address in the policy. Policy positions related to provision of urban sanitation to both indigent and non-indigent households are required.

4.1.2 Current policy and legislative positions

The 1994 White Paper on Water Supply and Sanitation has a strong focus on sanitation planning and financing in urban areas, designating that *since sanitation is provided at household level, consistency with urban and rural housing policy is essential, both to ensure consensus on standards and strategies and to avoid double subsidies and that the cost of internal services and reticulation within a township's boundaries are generally considered to be part of the development costs of the property.* The White Paper takes the positions that *services in economically viable urban areas must be managed in a financially viable and sustainable way, whilst ensuring that adequate services are provided to the whole population.* The White Paper assigns the following responsibilities to responsible authorities in urban areas:

- To ensure that all households within their areas of service are provided with at least basic services within a reasonable time frame.
- To facilitate the provision of higher service levels through appropriate financing and tariff mechanisms, whilst ensuring the financial viability of the water and sanitation sector.
- To develop a business plan to show:

- the investment requirements and programme to meet service level goals decided, in terms of the above two principles, in consultation with the elected representatives of local residents;
- how the required capital investments will be funded, within the given capital subsidy policy framework;
- how the operating and maintenance costs, including interest and capital redemption charges on borrowed capital, will be fully recovered;
- the extent to which residents can afford and are willing to pay for the new services provided in terms of the tariff and income policy adopted.

In addition, the SFWS provides guidance on the technology choices which local government can make, indicating that the definition of sanitation *does not define the technology to be used in providing such a service. This decision, made by the water services authority, is the key to success in providing free basic sanitation services in a sustainable manner. The selection of technology is strongly dependent on settlement conditions. Water services authorities must typically address the following situations:*

- In urban areas, where many businesses are located and where residential densities are high, waterborne sanitation is generally the most appropriate technical solution and should be regarded as a basic level of service for the purposes of the free basic sanitation policy.
- In intermediate areas (for example, peri-urban areas or rural areas where settlement densities are high), a water services authority must decide on an appropriate technology which is financially viable and sustainable. In most instances, on-site sanitation systems are likely to be the most appropriate solution. Care must be exercised when choosing waterborne sanitation systems in this context. The water services authority must ensure that the water services provider will be able to maintain and operate this system sustainably over time with the available funds.

4.2 POSITION 2: FREE BASIC SANITATION

Policy Positions

Free basic sanitation will be provided only to indigent households.

The Minister may attach conditions to the provision of free basic sanitation.

The Minister will provide norms and standards for provision of free basic sanitation to indigent households.

4.2.1 Problem statement

Providing free basic sanitation (FBSan) services to all South Africans place a significant burden on the state and on the WSA's, especially where individuals are able to afford these services.

Equitable access to sanitation services should target FBSan supply to the most needy, indigent individuals. Placing limitations on beneficiaries of FBSan will facilitate provision of these services to these indigent individuals, facilitating a high level of services where affordable and sustainable to the WSA.

Free basic sanitation should be provided as part of the basket of social services available to support and assist indigent households.

Regulations to monitor the enforcement of this policy position will need to be developed to ensure that water services institutions comply with the provision and to ensure that beneficiaries do not circumvent the system.

4.2.2 Current policy and legislative position

Section 104(1)(l) of the Water Services Act states the Minister may make regulations of issue guidelines to provide for or regulate "the development and implementation of an indigent policy" in order to give effect to its constitutional obligation to provide access to basic municipal services.

The White Paper on Basic Household Sanitation introduces the concept of *access to a free basic level of service indicating that current government policy requires that the very poor be given access to a free basic level of service*. The primary purpose of the free basic sanitation policy, according to the SFWS (2003) is to assist in promoting affordable access by poor households to at least a **basic level** of sanitation service. A basic level of sanitation requires that households and collective neighbourhoods maintain hygienic and sanitary practices for services to be effective.

The SFWS (2003) also indicates that *access to a tap and toilet is of no use if the water stops flowing or the toilet no longer works. Sustainability requires that services are affordable. For this reason, we have introduced a ground-breaking policy of free basic water and sanitation services. This means that everybody in South Africa has the right to a basic amount of water and a basic sanitation service that is affordable. With this right comes a responsibility – not to abuse the right to free basic services and to pay for services where these are provided over and above a basic service and an obligation to maintain public health at a local level, by ensuring that neighbourhood practices comply with basic hygiene requirements*.

The Free Basic Sanitation Implementation Strategy of DWAF (2010) indicates that, in the case of capital contribution, South Africa had adopted a principle that consumers get the service without making contributions in cash or in kind. However, this excludes certain 'on site' components of the facility. Similarly, from the operation and maintenance perspective, free basic means providing support- in the case of waterborne systems, operation and maintenance support of providing water for flushing, (recommended as 15 litres per person per day or 3 to 4 KL above the amount provided for in terms of the free basic water). Hygienic practices and local monitoring of collective sanitary behaviours is a requirement for the service to be effective. This amount will be more in the case of people who are at advance stages of AIDS. (How do we verify health status of people whether or not is in the advanced stage of AIDS). What could be the mechanism for verifying health status in comparison with indigent register which determines indigent?

4.3 POSITION 3: SANITATION SERVICE PROVISION ON PRIVATELY OWNED LAND

Policy Positions

Reaffirming the Privately Owned Land Policy position that a Water Service Authority has a responsibility to ensure sanitation services are provided to individuals living on privately owned land.

The use of the grants to provide basic sanitation services to households on private land is supported.

Reaffirming the MIG positions that *in order to address the needs of farm dwellers; MIG funding can be used to provide basic services to poor households living on private land, without servitudes, subject to certain conditions. One of these conditions is that the landowner must make an appropriate contribution to the capital cost*. The Minister may attach conditions to the provision of basic sanitation services on private land.

Sanitation provision on privately owned land should be provided as part of an integrated basket of services to these individuals.

Ownership of sanitation assets provided on private land may pass into the hands of the person owning the land in the following circumstances (1) where an "on-site" sanitation facility is provided to a household; and (2) where assets are required for services to consumers served by a water services intermediary who owns the land on which the consumers reside and where that intermediary has made an appropriate contribution to financing the cost of the assets.

The Minister will provide norms and standards for provision of basic sanitation services to households on private land.

The Minister will establish an enabling regulatory environment for the provision of water services to residents living on privately owned land.

4.3.1 Problem statement

There is not policy position outlining provision of sanitation to indigent people residing on private land. South Africa has the intent of addressing the “universal service obligation” which is to ensure provision of at least a basic level of sanitation service to all residents, including residents living on privately-owned land. This includes people living on commercial farms and game parks, mining land, church-owned land and industrial-owned land (Tissington, 2011). All indigent people are obligated to ensure hygienic and sanitary practices are maintained in order that provision is feasible.

An estimated four million South Africans reside on privately owned land (mostly commercial farming land) (DWA, 2011). It is yet to be determined how many of these people do not have access to a basic level of water service.

Individuals who may benefit from a policy position on provision of sanitation on private land include:

- Farm workers (and their families) which receive water services (usually associated with accommodation) as part of their employment contract with the farmer – the farmer is an intermediary to his workers. This also applies to retired workers and their families (DWA, 2002).
- Employees on mines and other industries which receive water services (usually associated with accommodation) as part of their employment contract with the mine or industry - the mine or industry is a water services intermediary to these employees (DWA, 2002).

A water services intermediary is any person who is obliged to provide water services to another in terms of a contract where the obligation to provide water services is incidental to the contract (as per the Water Services Act) (DWA, 2002). This means that the intermediary must have a contract with the consumer for a purpose other than the provision of the water services (for example an employment or property lease contract) in order for it to be recognised as an intermediary rather than a service provider (DWA, 2002).

Many of the people residing on privately owned land are also private land dwellers who are not employed by the private land owner. There is a major challenge in terms of WSA planning for and providing sustainable water services to these dwellers since the mechanism for enabling and assisting water services provision may not be relevant in such circumstances (DWA, 2011). In addition, the situation surrounding the level of security of tenure afforded to these dweller or occupiers could also be uncertain.

Unfortunately despite their clearly legislated water services responsibilities, in many such cases, it is evident that Water Service Authorities do not see it as a priority or even as their responsibility to step in and ensure provision of basic water services on privately owned land to these dwellers. Private property owners are obligated to ensure that environmental health conditions prevail in order to contribute to collective public health of the country as a whole.

4.3.2 Current policy and legislative position

The Strategic Framework of Water Services (2003) provides that “*Water service authorities have a responsibility to ensure that all people living within their jurisdiction (including those residents living on privately owned land) are progressively provided with at least basic water and sanitation services (first step up the ladder)*”. This policy thus defines responsibilities in the provision of water services to residents living on privately owned land.

The Water Services Act (No. 108 of 1997) provides a definition of a “water services intermediary” as meaning any person who is obliged to provide water services to another in terms of a contract where the obligation to provide water services is incidental to the main object of that contract.

Environmental health monitoring is key.

4.4 POSITION 4: SANITATION SERVICES FOR BACKYARD DWELLERS

Policy Positions

Municipal by-laws must address sanitation services to backyard dwellers. Recognising the SALGA recommendation that by-laws could regulate sub-letting, the enforcement of maintenance standards and allow for a system of penalties if landlords did not follow the rules. These are also relevant to controlling unsuitable uses of back yard structures, such as polluting industries occurring within residential areas.

Supporting SALGAs recommendation that service specifications for new developments should be designed to include:

- a) Planning for excess capacity for informal rental growth
- b) Planning for separate water, electricity and sanitation facilities for household tenants
- c) Separate metering for services within multiple rental units and household rental.

The property owner must declare to the WSA any additional connections to the municipal sewage system.

4.4.1 Problem statement

Backyard dwellings are one of the largest housing sub-sectors in South Africa (SALGA, 2013). The sector successfully provides accommodation to non-qualifiers for subsidized housing, migrants or temporary workers not seeking home ownership, and any other households wishing to rent but who cannot afford formal rental accommodation available (SALGA, 2013). According to SALGA (2011) 25% of all South Africans now rent and informal rental markets create accommodation opportunities for almost two thirds of all households not able to access formal accommodation (SALGA, 2011). The quality and size of backyard dwellings varies greatly. Many units—although informal—are adequate, but other backyard households have inadequate access to services and safety (SALGA, 2013). SALGA, (2013) indicates that close to half of all backyard structures do not have formal dwellings with access to basic services.

Additional problems with sanitation services in backyard dwellings are over-use of existing infrastructure networks. The number of people utilising toilets, taps, drains and cooking facilities on a specific site can stretch the carrying capacity of the existing infrastructure.

Public ablution and toilet facilities may relieve this burden to neighbourhoods of private households.

4.4.2 Current policy and legislative position

Sanitation policy currently provides no guidance on provision of this service to backyard dwellings in the country.

A policy position on provision on sanitation services to these dwelling is required.

4.5 POSITION 5: SANITATION SERVICES TO INFORMAL SETTLEMENTS

Policy Positions

Reaffirming the SFWS position *that water services authorities should seek to address the security of tenure issues expeditiously. Interim basic water and sanitation services should be provided as appropriate, affordable, and practical in temporary settlements accordance with a progressive plan that addresses both land tenure and basic services.*

The Minister will determine the acceptable timeframe for interim sanitation.

Labour-intensive provision of sanitation in informal settlements is encouraged. Alignment with Expanded Public Works and Community Works programmes should be pursued to support labour-intensive sanitation provision.

Community-based operation and maintenance of interim informal settlement sanitation solutions is encouraged.

The Minister will provide norms and standards for provision of a basic sanitation services to households in informal settlements.

4.5.1 Problem statement

Populations living in irregular urban settlements experience the same suite of interrelated problems: they have no access — or limited access only — to basic services, and they have no security of tenure. Their situation is precarious as they usually belong to the poorest segment of the urban population. Collective arrangements are thus appropriate for public health purposes.

Similarly, it is difficult for local government to provide basic services to these individuals as secure land tenure is a defining requirement for provision of services in their jurisdiction. Public services, where necessary, are a minimum requirement to maintain public health conditions for the most a socio-economically vulnerable people.

Providing adequate privately 'owned' sanitation in growing urban informal settlements poses a specific sanitation challenge (Tissington, 2011). A 2010 report by DWA indicates that *arguably, this is the single greatest challenge facing the water and sanitation sector in South Africa. The latest data shows that between one and two million households live in informal settlements in South Africa. High settlement densities, insecurity of tenure and complex community dynamics make planning and implementing standard infrastructure solutions difficult, if not impossible. The willingness to explore new delivery models, together with careful planning, reflective learning and engagement with local communities are needed.*

Collective property use and management is the alternative to (western) private property models that informal settlement dwellers do not, by definition, have access to. Communal use of land is accompanied by communal management systems, for which African models abound.

There are particular policy gaps in relation to those living in dense urban informal settlements (particularly those situated on private land). Local government is providing a range of sanitation to these settlements – VIPs, chemical toilets, bucket system, Mobisan approach (communal sanitation in containers), DEWATS etc. – and there is a need for more guidance to municipalities on the cost and efficacy of these approaches, and preconditions for success (Tissington, 2011).

The Upgrading of Informal Settlements Programme (UISP) is instituted in terms of section 3(4) (g) of the Housing Act and is contained in the National Housing Code. The UISP provides funding to municipalities to upgrade informal settlements *in situ*, providing security of tenure and improved access to services in collaboration with communities (Tissington, 2011). The norms and standards for municipal engineering services in the UISP indicate that housing programmes for the upgrading of informal settlements would include provision of:

- interim municipal engineering services as a first phase to alleviate immediate/emergency need to access potable water, sanitation services and certain preventative measures to curtail the occurrence of disasters.
- the upgrading of such interim services into permanent municipal engineering services and/or the provision of permanent municipal engineering services from the outset of the project as may be required by local project circumstances

The sanitation policy does not however provide similar clarity on the provision of sanitation services to informal settlements beyond the confines of private property models for housing delivery. Infrastructure distribution policies preclude basic public health-related services provision to collectively settled land, unless private property planning prevails. The challenge is to explore alternatives that are appropriate to urbanisation trends in Africa, where collective responsibility for daily basic needs of civil society may be met by means of collective management.

In terms of aspirations, although private property ownership and responsibility may be a long term intention of informal settlement dwellers, given the state of the economy and unemployment prospects, most people will remain dependant on collective social solutions for meeting their daily basic needs. In this respect, public services provision to maintain basic public health conditions is appropriate, rather than the inadequacies of overloading facilities and their maintenance (whether chemical or flush /other 'technical options') with the unstable model of private households sharing as interim or emergency services (including TRCs).

4.5.2 Current policy and legislative position

The Water Services Act (No. 108 of 1997) defines basic sanitation as the *prescribed minimum standard of services necessary for the safe, hygienic and adequate collection, removal, disposal or purification of human excreta, domestic waste water and sewage from households, including informal households.*

The SFWS (2003) indicates that provision of sanitation services to individuals living on unauthorised land and in informal settlements poses a *challenge to water services authorities. Water services authorities should seek to address the security of tenure issues expeditiously. Interim basic water and sanitation services should be provided as appropriate, affordable, and practical in accordance with a progressive plan that addresses both land tenure and basic services. DWS will provide best-practice guidelines to assist water services authorities.* The Draft National Sanitation Policy (2012) recommends that municipalities can access funding from the *Upgrading of Informal Settlements Programme to upgrade informal settlements, provide security of tenure and provide for interim sanitation services as a first phase to alleviate the immediate emergency need for access to basic sanitation services. Upgrading of these interim services into permanent sanitation services and/or the provision of permanent municipal sanitation services from the outset can be done depending on the local circumstances and requirements. The Housing Codes National Norms and Standards must be adhered to in this regard. The operation and maintenance of these sanitation infrastructures is the responsibility of the WSA.*

The White Paper of Basic Household Sanitation (2001) indicates that beneficiaries who enjoy informal land rights to the property they occupy may also access the subsidy.

The DWAF (2010) FBSan Implementation Strategy indicates, related to temporary services - *for various reasons a municipality may have to accommodate informal settlements and provide temporary services to households in these settlements until such time as permanent services can be provided. From a sanitation point of view the history of such situations in South Africa suggests that it is best to start with a sound, 'on-site' sanitation system which is low cost and meets health criteria (the department will be seen as prescriptive or in favour of VIP, it's better to say on-site sanitation where it is applicable). Some of the temporary solutions applied in the past (notably buckets and chemical toilets) have high operating costs and the amount spent on operating them can quickly exceed the capital cost of a solution based on a pit. In this regard it should be noted that the Framework for Water Services states: 'Chemical toilets must only be considered as a temporary sanitation service. Bucket collection systems are not an adequate level of service. The costs of chemical toilets and bucket collection should not be borne by households'. The department needs to revisit the sanitation interim solution and not only*

provide interim solution in informal settlements. The politicians and residence in informal settlement are arguing that they have been given substandard solution as interim while they have been residing in informal settlements for more than 40 years. So what are the timeframes of interim?

4.6 POSITION 6: EMERGENCY SANITATION

Policy Positions

Emergency sanitation interventions should be limited to short term, temporary interventions

Minister will determine acceptable timeframe for short-term, temporary interventions

WSAs can access assistance through grants to respond rapidly to sanitation emergencies on a temporary basis. Emergencies include failure of bulk sanitation infrastructure.

Emergency sanitation will be provided to reflect the vulnerabilities, needs and preferences of the affected population

Where appropriate, users should be involved in the management and maintenance of emergency hygienic sanitation facilities.

Emergency sanitation technology must be appropriate to the emergency situation.

Regulations for emergency sanitation will be formulated

The Minister will provide norms and standards for provision of sanitation services and hygiene promotion in emergency situations.

4.6.1 Problem statement

Current sanitation policies do not address this issue. Temporary Relocation Areas (TRAs) - sometimes called transit camps – have been established by some municipalities to shelter people who have been affected by an emergency e.g. fire, flood, eviction.

In the *Joe Slovo* eviction case, the Constitutional Court ordered the relocation of residents of Joe Slovo informal settlement to Temporary Relocation Units (TRUs) in Delft, stipulating the standards of the TRUs (Tissington, 2011) as being *situated within reasonable proximity of a communal ablution facility; make reasonable provision for toilet facilities, which may be communal, with waterborne sewerage; and make reasonable provision for fresh water, which may be communal.*

4.6.2 Current policy and legislative position

The Water Services Act (No. 108 of 1997) mandates the Minister to provide water services in emergency situations, which are defined as *situation declared as such in terms of a law and which is likely to cause injury or loss of life;*

The Draft Sanitation Strategy (2008) indicates that *emergency sanitations programmes should be limited to very short term interventions that last a few days to a few weeks. Long term informal settlements must not be treated as emergency situations for the purpose of this strategy but should be provided with viable and sustainable solutions. Solutions such as communal facilities and chemical toilets should not be used where the system is expected to have duration of more than one month.*

The Draft National Sanitation Policy (2012) also indicates that *WSAs can access assistance through grants administered via Provincial Human Settlements Department, to enable them to respond rapidly to emergencies through the provision of land, sanitation services, relocation assistance and shelter to households on a temporary basis.*

Minimum standards for municipal engineering services, including sanitation, are set out in the Emergency Housing Programme. The National Housing Programme for Housing Assistance in Emergency Housing Circumstances – commonly referred to as the Emergency Housing Programme (EHP) – is instituted in terms of section 3(4) (g) of the Housing Act with the objective “to provide for temporary relief to people in urban and rural areas who find themselves in emergencies.” With the approval of the MEC, the cost of consumption of “sanitation services provision” for a maximum of 3 years (in cases where the municipality presents proof of its inability to provide the services from its own resources, and the services are actually provided by the municipality) can now also be funded by the EHP.

The EHP provides guidelines on the level of basic engineering services to be provided in temporary settlements - *temporary sanitation facilities must be provided, which may vary from area to area due to varying geographical and other conditions. Where possible, VIP toilets must be provided as a first option, on the basis of one VIP per five families (1:5). In circumstances where soil and other site conditions do not allow for the use of VIP toilets, alternative systems must be investigated. A small bore sewerage or other appropriate system (to be used on a shared basis with one toilet per five families within the suggested settlement pattern) could be provided. The sewerage system must as far as possible be usable in a permanent configuration or layout in situations where future upgrading is envisaged as a first option towards a permanent housing situation.*

Disaster Management funding allocations may be relevant vs “permanent” private property model.

5 Institutional Policy positions

5.1 POSITION 7: SANITATION AT PUBLIC INSTITUTIONS

Policy Positions

All public institutions are responsible to provide sanitation services. Sanitation services at public institutions must include hand washing facilities, hygiene and end-user education

The Minister will provide, in consultation with public institutions, norms and standards for sanitation services at public institutions. The public institutions providing sanitation will conform to these norms and standards.

The role of national departments and private institutions in provision, refurbishment and maintenance of sanitation services to public institutions is recognised and supported. Sanitation services provided by these departments and private institutions must comply with norms and standards.

Provision of sanitation services at public institutions must recognise the role of local government and planning, construction and altering of sanitation services to public and private institutions must be done with prior consent of the WSA (local authority), as required by the SANS 10400 (National Building Regulations) and the Building Standards Act (No. 103 of 1977).

Development of sanitation norms and standards of government and public institutions should be in consultation with the Minister.

5.1.1 Problem statement

Due to the dual implementation of sanitation services, with household provision being the responsibility of Water Service Authorities (WSAs) (including the wastewater treatment works) and provision at public institutions being the responsibility of various national departments, situations have occurred where public institutional sanitation is planned and implement without consultation with the WSA. This has resulted in sanitation services being provided to schools, clinics etc. without consideration/planning for these additional connections to the WSA managed wastewater treatment works.

The policy and strategy does not currently address sanitation in public institutions such as privately owned institutions such as crèches and day-care centres; churches; old age homes.

The policy position remains weak related to public institutional sanitation.

5.1.2 Current policy and legislative position

The White Paper on Basic Household Sanitation (2001) indicates that *the policy will focus mainly on the improvement of health and the provision of adequate sanitation facilities in households, **schools and clinics** as well as the collection, removal and disposal waste and the related health and hygiene practices.* From the perspective of health and hygiene the policy indicates that *educational programmes are required on national, provincial and with strong media coverage, **publicity and promotion in schools and clinics.***

The SFWS (2003) designates that the national departments (Dept. of Education; Dept. of Health) (together with the provincial departments) are responsible to ensure that all **schools, clinics and hospitals** are provided with adequate water and sanitation facilities and that these are operated sustainably and are adequately maintained but that *provincial public works departments may undertake (or oversee) the construction of water and sanitation infrastructure on behalf of other departments in the province. Typically this will include setting design standards for water and sanitation facilities in **schools, hospitals and clinics.***

5.2 POSITION 8: BULK SANITATION INFRASTRUCTURE AND ESTABLISHMENT AND FUNCTIONS OF REGIONAL WATER AND SANITATION UTILITIES

Policy Positions

Reaffirming the policy position that the Minister is responsible for Regional Bulk Infrastructure, including master planning and infrastructure functionality.

Bulk sanitation infrastructure is defined as regional infrastructure, covering large areas and addressing more than one WSA.

The Minister may direct a Regional Bulk Utility to provide some or all bulk sanitation service provision in their jurisdiction.

The functions of the Regional Water and Sanitation Utility includes Bulk Sanitation Services

5.2.1 Problem statement

Current arrangements of the water management institution are limited in the effective development and management of Regional Bulk Infrastructure. Water Boards, originally envisaged by the Strategic Framework for Water Services 2003 to fulfil this role, are largely considered to be regional water service providers.

The cross-boundary nature of regional sanitation infrastructure precludes the management of this infrastructure by a single WSA. WSA's also have no or limited capacity for managing and developing Regional Bulk Infrastructure.

DWA currently does not have an institution which is able to implement Regional Bulk Infrastructure provision. Regional Water Utilities can fill this gap in the sanitation institutional arrangement, with the Regional Water Utility fulfilling the role of building, operating, maintain and supporting Regional Bulk Sanitation Infrastructure.

5.2.2 Current policy and legislative position

The White Paper on Local Government (1998) takes the position that *in some areas district governments will play a role in the direct provision of bulk and regional services. Many District Councils have developed systems to manage bulk functions like wastewater and sewerage, and where appropriate this role should be strengthened. The role of District Councils in the planning and provision of infrastructure and regional services must occur within the policy and legislative frameworks put forward by national government, such as the Water Services Act (1997).*

The Strategic Framework for Water Services (SFWS) of 2003 outlines that in some areas of the country water services may be provided by regional service providers, defined as *services providers who operate regional infrastructure (crossing water services authority boundaries) and provide water services to (or on behalf of) more than one water services authority*. The SFWS indicates two categories of regional water service providers, namely **water boards** and **regional public utilities**.

5.3 POSITION 9: INTEGRATED PLANNING OF SANITATION

Policy Positions
Reaffirming the White Paper on Water Supply and Sanitation (1994) position that sanitation should be <i>integrated into programmes for the provision of other basic needs</i> . <i>The co-ordination of the various public organisations involved in the planning and delivery of basic services is therefore essential</i> .
Reaffirming the SFWS position that <i>water services development plans need to be integrated with the integrated development planning (IDP) process as set out in the Municipal Systems Act</i> .
An integrated National Sanitation Information System will be implemented and managed to monitor, report and evaluate the entire sanitation sector of the country.
Sanitation services planning by WSAs should be in conjunction with Environmental Health Practitioners, as well as other stakeholders and departments involved in the sector.

5.3.1 Problem statement

Provision of sanitation in South Africa is particularly fragmented and uncoordinated, largely due to the vast array of institutions involved in provision of this service. Situations arise of beneficiaries receiving subsidised services from both the municipal grant and through the low-cost housing programmes, provision of services to households and institutions without consideration of impacts on municipal sewer and sewage systems and provision of different levels of service in the same areas of jurisdiction.

5.3.2 Current policy and legislative positions

The White Paper on Water Supply and Sanitation (1994) advocates that sanitation should be *integrated into programmes for the provision of other basic needs*. *The co-ordination of the various public organisations involved in the planning and delivery of basic services is therefore essential*. *It is necessary to consider at least four mutually related factors required for development:*

- *physical infrastructure such as water supply, sanitation, roads, electricity and communications.*
- *social infrastructure including schools, hospitals, clinics and welfare organisations.*
- *economic infrastructure which is the employment, production and trading base including access to markets and finance.*
- *institutional infrastructure being organisational and civil administration structures at all levels. These should provide access to ordinary people to the processes of democratic local, regional and national government.*
- *Water quality is compromised by pollutants directly emanating from sewerage systems*

A fundamental principle of the White Paper (1994) is *integrated development* – requiring that sanitation development not occur in isolation from development in other sectors. Co-ordination is necessary with all tiers of government and other involved parties and maximum direct and indirect benefit must be derived from development in, for instance, education and training, job creation and the promotion of local democracy.

The White Paper on Basic Household Sanitation also advocates integrated development planning and the package of services approach to sanitation services, since there are critical linkages between the provision of health and hygiene education and sanitation services, water supply services, solid waste management and housing. Integrated planning with an increased emphasis on a “package of services” approach will allow for more

realistic decisions to be taken with regard to technical options and affordability. The sanitation package must consider the full range of sanitation needs within the community, including institutions such as schools, places of worship, crèches, clinics, courts, sports venues and the requirements of public places such as bus stops, taxi ranks, sports grounds and markets.

The SFWS (2003) indicates that *DPLG requires municipalities to undertake integrated development planning*. Employment opportunities are of high priority as in-migration is driven by work-seeking.

5.4 POSITION 10: NATIONAL WATER AND SANITATION ADVISORY COMMITTEE

Policy Positions

The Minister will establish a National Water and Sanitation Advisory Committee to provide, amongst others, policy advice; ensure that equity is achieved in sanitation services, advise on appropriate and acceptable sanitation technologies using appropriate technology criteria, feed into sanitation strategies and the updating of national sanitation norms and standards.

The committee will have, as part of its membership, sanitation experts, people who come from communities which are un-served and who understand the difficulties of sustainable development, national, provincial and local government representatives, NGOs, Civil Society and other role players in the sanitation sector.

5.4.1 Problem statement

The sanitation sector of South Africa was guided by the National Sanitation Task Team (NSTT) which was formed in 1995 to coordinate sanitation interventions by national departments. In 2001, in order to achieve greater alignment between sanitation and other municipal infrastructure programmes, the NSTT was re-established as a working group reporting to the Municipal Infrastructure Task Team (MITT), with DWAF as the coordinating department. However, with the shift of sanitation to the Department of Human Settlements, this advisory structure dissolved. The NSTT has, in 2015 been re-established and will guide and support the sector in future. Coordination across disciplines and sectors is paramount. Dominance of engineering and technical approaches and a lack of socialisation of public health drivers is the result

5.4.2 Current Policy and Legislation Positions

The White Paper on Water Supply and Sanitation (1994) indicates that the *Minister of Water Affairs and Forestry establish a National Water Advisory Council in order to ensure that a wide cross-section of South African society, representing all water users, have the opportunity to comment and advise on all aspects of water in the country. In respect of the specific issues surrounding water supply and sanitation, the National Advisory Council will play an important role in advising on priorities, monitoring progress and ensuring that equity is achieved. The Council will have, as part of its membership, people who both come from communities which are un-served and who understand the difficulties of sustainable development in our particular South African circumstances.*

Catchment Management Agencies are increasingly concerned by informal settlements as a point source of pollution of scarce water resources.

The White Paper on Basic Household Sanitation (2001) recommends a similar structure for sanitation, namely the National Sanitation Task Team (NSTT). *The NSTT has the purpose of co-ordinating sanitation interventions. In order to achieve greater alignment between sanitation and other municipal infrastructure programmes the sanitation co-ordination structure will be re-established as a sub-committee of the Municipal Infrastructure Task Team (MITT). The Department of Water Affairs and Forestry, as national sphere co-ordinator will be responsible for convening the sanitation sub-committee and will ensure participation by all relevant stakeholders. To give effect to the Cabinet decision that the Department of Water Affairs and Forestry must fulfil the role of national co-ordinator, the National Sanitation Co-ordination Office (NASCO) will be absorbed into the Department of Water Affairs and Forestry with the creation of a Sanitation Directorate.*

5.5 POSITION 11: ENFORCEMENT OF SANITATION REGULATIONS

Policy Positions

The Minister, in consultation with CoGTA and SALGA, will develop an effective formal reporting mechanism of the water services function from Local Government, which allows the Minister means within the legal framework to take corrective steps in case of serious malpractice or negligence affecting effective water resource management in country.

The Minister will apply the water use authorisation mechanism to set conditions for waste water management. It will be enforced strictly to ensure appropriate low-resource use sanitation solutions in low, middle and high income settlements.

Regulations for sanitation skills and professionalising of the sanitation sector will be developed by the Minister.

Reaffirming the SFWS position of *a proposed waste discharge charge and a water resource charge based on the "polluter pays" principle will be enforced.*

The Minister will provide norms and standards for the provision of all sanitation service.

The Minister will provide regulations for appropriate sanitation technologies.

5.5.1 Problem Statement

While local government is mandated to provide water and sanitation services, the national department of water and sanitation is responsible to perform the function of the national regulator, in conjunction with relevant stakeholders, including citizens.

Sanitation has had a growing impact on the water resource of the country, with increase nutrient levels in many rivers and dams. Sanitation regulations need to address these growing challenges in the country.

There has been a lack of clarity on the national institutional framework around basic sanitation, particularly as the DHS took over the National Sanitation Programme from DWA in 2009. This has resulted in a lack of regulation at the national level.

The National Water Services Regulation Strategy (NWSRS) (January 2010) is aimed to outline the national regulator of the water services sector, with Part E of the document defining the approach to the regulation of sanitation. The following list is a summary of some of the relevant provisions contained in Part E of the NWSRS (taken from Tissington, 2011).

- *Planning:* In terms of planning, the NWSRS describes what should be contained in a WSDP, particularly in relation to sanitation. WA monitors compliance of WSAs in developing the WSDP.
- *Financing:* In terms of financing, DWA monitors all MIG applications for sanitation projects and is supposed to monitor adherence to MIG conditions in the execution of projects. The NWSRS acknowledges that this is not happening at present. WA can reject MIG applications which do not comply with policy requirements, but has no power of sanction if project execution is flawed. Further, where WSAs or WSPs are shown to be financially non-viable, DWA has no direct mandate to intervene but can make requests and recommendations. More power needs to be given to DWA to intervene in these situations.
- *Design and construction:* In terms of design and construction, sanitation infrastructure must be consistent with national protocols, regulations and legislation, as well as local water services by-laws. The NWSRS outlines a number of issues relating to sanitation infrastructure including: the problem of temporary facilities being used for longer than desirable; chemical toilets, when required as a last resort, should be used by limited households and be well-maintained; and lack of clarity on how many households per toilets is acceptable in informal settlements. The NWSRS poses the question whether a sub-basic standard should be developed for certain contexts.

- *Operation and maintenance:* A WSA must keep an up-to-date asset register and asset management plan for sanitation infrastructure. The WSP must maintain all assets proactively e.g. through regular cleaning of sewers and maintenance of pump stations, and respond to breakages and spills timeously. DWA is supposed to monitor that this occurs, and intervene to request remedial action where necessary.
- *Maintenance of on-site sanitation:* The distributed nature of on-site sanitation poses a challenge to the regulator, however DWA should be monitoring trends in the useful lives of VIPs, for example, and alert the responsible authorities when necessary. Often when toilets are built using MIG funding, responsibilities for pit emptying are not specified, which is problematic. Households are in the first instance responsible for monitoring the status of pits or other collection chambers, while the WSA must at least put in place monitoring mechanisms around on-site sanitation systems and environmental conditions. DWA will monitor WSAs to ensure they comply with this monitoring programme.
- *Management of grey water where there is on-site sanitation:* WSAs are responsible for ensuring that national grey water guidelines are adhered to, and DWA monitors this adherence. There is, however, no enforcement mechanism to ensure compliance, and legislative reform around the Compulsory National Standards is needed to address the issue of grey water.
- *Environmental health and education:* In terms of the Health and Hygiene Education Strategy for Water Services, the WSA is responsible for ensuring that health education is implemented in communities whenever a sanitation project is constructed, as well as on an ongoing basis. DWA monitors WSA's adherence in this regard. Delivering information is not effective and requires quality management. Measures of behaviour change and hygienic practices are the point and purpose of investments meant to achieve that which resists measurement, but is eminently measurable.

5.5.2 Current policy and legislative positions

Section 155(7) of the Constitution gives national government the mandate to regulate water services.

The SFWS (2003) indicates that the overall objective of *sanitation regulation is to protect consumer and public interests by:*

- *ensuring compliance with minimum national norms and standards;*
- *ensuring good performance and the efficient use of resources; and*
- *ensuring good contracting practice.*

The vision of regulation in the SFWS is that water services are effectively regulated to achieve the above objectives.

The SFWS also recommends that national regulation of water services will extend to the following:

- Norms and standards regulation
- Economic regulation
- Contract regulation

Current policy thus focuses on regulations through norms and standards, regulation of tariffs and regulation of contracts of WSA and WSPs.

6 Sustainable Sanitation Policy Positions

6.1 POSITION 12: HYGIENE EDUCATION AND END-USER EDUCATION

Policy Positions

Sanitation service provision must include ongoing hygiene education and end-user education

Hygiene education should be an ongoing activity during the implementation of a programme for a basic sanitation service provision, including at a minimum, a visit to the household pre-construction; during construction and at completion of construction of the sanitation facility.

Sanitation education will include rural, peri-urban and urban areas of the country

6.1.1 Problem Statement

Health and hygiene (H&H) education focuses on changing behavioural practices to prevent the spread of diseases, and is meant to complement the provision of basic sanitation infrastructure. It has been shown that ongoing health promotion and hygiene education can have a positive impact on environmental integrity, lower health costs and reduce health risks and can also reduce operation and maintenance costs, ensure long-term sustainability of sanitation service provision (Tissington, 2011).

District and metropolitan municipalities have the primary responsibility for health and hygiene education and promotion related to sanitation.

Despite having extensive knowledge of the importance of sanitation H&H training in South Africa and having sector-specific tools and methods to support these programmes, research and reviews of sanitation programmes have shown that H&H training in the country is weak and often non-existent. H&H training is often carried out in a haphazard manner, with little planning or focus. This is regrettable as H&H is the critical component of a programme which has a significant impact on the reduction in sanitation-related diseases and it ensures the sustainable operation and maintenance of a facility which has been provided to household using national resources. These problems are due in part to current gaps in policy and institutional confusion over the roles and responsibilities between WSAs and municipal environmental health services.

While municipalities provide hygiene awareness programmes as a once-off intervention during the implementation of basic sanitation infrastructure, they do not include ongoing health and hygiene education as a component of FBSan. Research has shown that once-off event or visit to an individual in the household is not an effective means of achieving the end-goal of behavioural change of poor sanitation practices. "Ongoing" without indicators that measure effectiveness will waste further resources on "social consultants" that are intended for beneficiaries. Local monitoring of hygiene and end-use education is crucial.

Health and hygiene awareness, promotion and education are even weaker in the peri-urban and urban areas of the country. Research has shown that the demographic and service delivery characteristics of rural, peri-urban and urban settlement and individuals residing therein have various similarities and differences. For example, individuals in the urban and peri-urban areas may have similarities in the type of sanitation to which they had access. However, individuals in the peri-urban settlement follow the rural village trends in characteristics such as income levels, education levels and professions. Health and hygiene interventions need to take consideration of these settlement characteristics when implementing promotion, awareness and education programmes.

Current gaps in policy as well as institutional confusion over roles and responsibilities, has meant that this aspect of sanitation has often been neglected. Clarifying roles and responsibilities around ongoing health and hygiene education is critical to ensuring that attention is given to this area (Tissington, 2011).

6.1.2 Current policy and legislative positions

According to Regulation 2 of the Compulsory National Standards published in terms of the Water Services Act, the minimum standard for basic sanitation services includes “the provision of appropriate education.”

The definition of a basic sanitation service in the Strategic Framework for Water Services also includes “the communication of good sanitation, hygiene and related practices.”

Health and hygiene awareness is central to the definition of a sanitation service in South Africa (see definition of basic sanitation facility). The White Paper on Water Supply and Sanitation (1994) indicates that national responsibility is *to support regional and local efforts requires the development and dissemination of appropriate programmes for promotion, training, and health and hygiene education. Local level at a community and neighbourhood level will address context specific realities.*

The White Paper on Basic Household Sanitation (2001) also indicates that there is *little public awareness of the strong links between sanitation and health. This must be redressed through an information dissemination programme aimed at promoting awareness of the role of sanitation in health. Hygiene information, education and awareness programmes must be developed hand-in-hand with servicing projects. These programmes aimed at developing good hygiene behaviour must start before construction commences and continue well beyond the construction phase. Behaviour change is not automatically a result of information (knowledge) or awareness. This is a flaw of assumptions that requires addressing at this late stage.*

In 2004, the National Health Act 61 of 2003 was passed, delineating the responsibility for municipal health services to district and metropolitan municipalities.

6.2 POSITION 13: GREY WATER MANAGEMENT IN SANITATION SERVICE PROVISION

Policy Positions

Management of grey water is encompassed in sanitation service provision. The Minister will set conditions in the water use authorisation to ensure the good management of grey water.

Hygiene education must include management of grey water.

Grey water recycling by decentralised and centralised systems is encouraged.

The Minister will provide norms and standards for grey water management.

Use and management of grey water in a safe and sustainable manner is required

6.2.1 Problem statement

Grey water management is a crucial component of management of waste streams in households. Grey water is untreated household wastewater from baths, showers, kitchen and hand-wash basins, and laundry (i.e. all non-toilet uses). Incorrect storage, use and disposal of grey water can lead to a variety of health concerns, including mosquito breeding (from ponding of grey water); contamination of drinking water supplies; and odours from stagnant water.

Reuse of grey water offers one means of relieving pressure on freshwater supplies. Safe management of grey water, which encourage reuse and recycling of the resource should be encourage in a water scare country, while at the same time focussing on ensuring the safety of reuse and recycling.

6.2.2 Current policy and legislative position

The current policies do not address the policy position on grey water. There is no specific reference to grey water in the National Water Act (NWA) No. 36 of 1998 (Republic of South Africa. 1998) although the sections concerning water resource management do apply.

6.3 POSITION 14: REDUCE, REUSE, RECYCLE, RECOVER AND RECLAMATION IN THE SANITATIONS SECTOR

Policy Positions

Sanitation provision must emphasise the need for the conservation of water resources and the use of appropriate technologies which are environmentally sustainable.

Sanitation services should be provided based on the principles of minimising the use and impacts on natural resources.

Where economically viable and sustainable, the liquid, solid and gaseous constituents of wastewater and excreta end products should be used, reused and recycled for further environmental benefits particularly in energy generation.

The return of treated wastewater to a source other than the water resource requires special motivation.

The Minister will develop regulations for the use, re-use recycling and recovery of the liquid, solid and gaseous constituents of human wastewater and excreta.

The Minister may attach reduce, reuse, recycling and/or recovery conditions to a license application.

WSAs must undertake the management of sludge in accordance with the Water Management Series of Minimum Requirements (version 2: 2008) as development by the Department of Water and Sanitation.

6.3.1 Problem Statement

South Africa's sanitation policies are transformational and thus focussed on addressing sanitation backlogs in the country. The concepts of reduction, re-use, recycling and recovery in the sanitation sector are not addressed.

The aspect of 'reduce' in the waste sector requires that the amount of waste being produced be minimised. Human waste, faeces and urine, cannot be minimised but the resources utilised in the collection, storage and treatment of these can. Sanitation services need to ensure that the use of natural resources, particularly water, be kept to the absolute minimum. Similarly, recycling of these resources needs to be maximised (e.g. reusing wastewater; returning nutrients and organic material to agriculture), and the protection of other non-renewable resources, e.g. through the production of renewable energies (such as biogas).

Recovery and use of human excreta is a growing practice in the sanitation sector. Sanitation systems can safely recycle excreta resources (plant nutrients and organic matter) to crop production in such a way that the use of non-renewable resources is minimised. When properly designed and operated, sanitation systems can provide a hygienically safe, economical, and closed-loop system to convert human excreta into nutrients to be returned to the soil, and water to be returned to the land. Agricultural trials around the world have shown measurable benefits of using treated excreta in agriculture as a fertilizer and soil conditioner. This applies in particular to the use of urine. Another aspect is the global shortage of phosphorus, a limited resource which is required in fertilizer production. Known mineral phosphate rock reserves, in particular, are becoming scarce and increasingly costly to extract. Use of human excreta, particularly urine, provides a good source of phosphorus.

Individuals who wish to use treated effluent for agricultural purposes are, in terms of Section 21 of the National Water Act (Act 36 of 1998), required to apply for a conditional water-use licence under the Act. The Department of Water Affairs and Forestry (DWAF) processes applications for any type of treated effluent re-use. If the intended re-use involves public health issues such as the production of food, or sports facilities that promote probable direct contact with surfaces irrigated with treated wastewater, the provincial Departments of Health (DOH) become involved (Steyn and Jagals, 2000).

6.3.2 Current policy and legislative positions

The Draft National Sanitation Policy (2012) does advocate that *where economically viable and sustainable, the liquid, solid and gaseous constituents of wastewater and excreta end products should be recycled for further use*

and for environmental benefits (e.g. composts, bio-fuel, irrigation etc.). The return of treated wastewater to the water cycle is considered to be essential and deviations from this approach require special motivation.

The same policy also takes the positions that WSAs must undertake the management of sludge in accordance with the Water Management Series of Minimum Requirements (version 2: 2008) as developed by the Dept. of Water Affairs. Catchment Management Agencies are to be involved in this aspect.

Regulations Relating to Compulsory National Standards and Measures to Conserve Water (DWAF, 2001), related to the use of effluents:

1. A water services institution must ensure that the use of effluent for any purpose does not pose a health risk before approving that use.
2. Any tap or point of access through which effluent or non-potable water can be accessed, must be clearly marked with a durable notice indicating that the effluent or non-potable water is not suitable for potable purposes.
3. A notice contemplated in sub regulation (2) must be in more than one official language and must include the PV5 symbolic sign for non-potable water as described in SABS 1186: Symbolic Safety Signs: Part 1: Standards, Signs and General Requirements.

6.4 POSITION 15: EFFLUENT MANAGEMENT

Policy Positions
Reaffirming the polluter pays principle, particularly related to effluent discharge from municipal wastewater treatment works. Similarly the principle is applied to wastewater from industry, agriculture, mining and other sectors in the country.
Effluent management infrastructure and technology must meet appropriate technology criteria as determined by norms and standards. Technologies must be approved before being released into the sanitation market.
The Minister will provide effluent management conditions, regulations, norms and standards
Reaffirming the SFWS position that Water Services Authorities have a <i>right but not an obligation to provide industrial water or to accept industrial wastewater from industries within their area of jurisdiction.</i>
WSAs may set standards for industrial waste which they will accept.
Standards for effluent discharge must be enforced.

6.4.1 Problem Statement

Inadequate treatment of human effluent may result in pollution of South Africa's water resources. This will result in an increasing cost of treatment of water for drinking purpose.

Effluent according to the Regulations Relating to Compulsory National Standards and Measures to Conserve Water (DWAF, 2001) means *human excreta, domestic sludge, domestic waste-water, grey water or waste water resulting from the commercial or industrial use of water.*

According to Guidelines for Compulsory National Standards and Norms and Standards for Water Services Tariffs and Water Services Provider Contract Regulations, before a water services institution allows an industry or business to connect to its sewerage system it must consider the effect of that discharge on the quantity and especially the quality of the effluent ultimately discharged from the sewage works. If accepting that discharge would pose a risk to the treatment process or lead to a breach of the permit, the water services institution should only agree to accept the effluent once the harmful substances have been removed or reduced. Industries can comply by:

- o pre-treating their effluent such that it complies with the permit conditions;

- separating effluent discharges and treating the harmful component of the discharges separately;

Current sanitation policies are largely focussed on basic sanitation service provision. Future sanitation policy must address all aspects of sanitation system in the country. Hence, a definition of the components of sanitation systems is required. Water Quality Monitoring must be linked to these sanitation systems, as reporting current does not result in actions and supportive responses to address ongoing and increasing pollution.

6.4.2 Current policy and legislative positions

The White Paper on Water Supply and Sanitation (1994) indicates that as South Africa is a *water deficient country, all effluent has to be purified and returned to the rivers. As a result of inadequate effluent treatment and illegal discharges, the quality of water is deteriorating in many areas. In time, quality may become a more important factor than quantity in water management in some areas, particularly in the interior.*

The 1997 Water Service Act defines “disposal of industrial effluent” means the collection, removal, disposal or treatment of effluent emanating from industrial use of water. The same Act indicates in Section 7 (2) that no person may dispose of industrial effluent in any manner other than that approved by the water services provider nominated by the water services authority having jurisdiction in the area in question. (3) A water services authority which— (a) provides water for industrial use; or (b) controls a system through which industrial effluent is disposed of must make bylaws providing for at least—

- i. the standards of service;
- ii. the technical conditions of provision and disposal;
- iii. the determination and structure of tariffs;
- iv. the payment and collection of money due; and
- v. the circumstances under which the provision and disposal may be limited or prohibited.

The White Paper on Basic Household Sanitation (2001) introduces the polluter pays principle to the sanitation sector. This principle advocates that polluters must pay for the cost of cleaning up the impact of their pollution on the environment.

Regulations Relating to Compulsory National Standards and Measures to Conserve Water (DWAF, 2001), related to the quantity and quality of industrial effluent discharged into a sewerage system: *A water services institution is only obliged to accept the quantity and quality of industrial effluent or any other substance into a sewerage system that the sewage treatment plant linked to that system is capable of purifying or treating to ensure that any discharge to a water resource complies with any standard prescribed under the National Water Act.*

The same regulations indicate that *a water services institution may impose limitations on the use of grey water if the use thereof may negatively affect health, the environment or available water resources.*

The regulations indicate that *a water services institution is only obliged to accept the quantity and quality of industrial effluent or any other substance into a sewerage system that the sewage treatment plant linked to that system is capable of purifying or treating to ensure that any discharge to a water resource complies with any standard prescribed under the National Water Act.*

6.5 POSITION 16: OPERATION AND MAINTENANCE

Policy Positions

Free basic sanitation promotes sustainable access to a basic sanitation service by subsidising the ongoing operating and maintenance costs of a basic sanitation service. WSAs must be transparent about the allocation of funds for the operation and maintenance of sanitation systems and must report on the implementation on an annual basis. .

Reaffirming the SFWS position that all water services authorities must allocate sufficient maintenance *to maintain the sanitation services infrastructure and related systems adequately*. The planning of capital expenditures must also be integrated with the associated operation and maintenance requirements and expenditures.

Reaffirming the SFWS position that a water services authority must maintain a register of water services assets and put in place a system to manage these assets in terms of the maintenance and rehabilitation plan

6.5.1 Problem Statement

A recent review of the local government grant system by National Treasury (National Treasury et al, 2014) indicated that *several issues were established as undermining efficient asset management of municipal infrastructure, such as the lack of credible asset management plans and non-prioritisation of renewal and maintenance expenditure. In the case of the renewal it is recognised that this relates directly to the grant system: since the establishment of the current local government system, grants have largely focused on the extension of basic services to all citizens as per the Constitution's Bill of Rights. This emphasis on backlog eradication has, with good motives, incentivised municipal investment in new infrastructure that connects previously un-serviced areas to water, sanitation, electricity or roads networks. However the conditionality of many grants restricts municipal investment to building new infrastructure rather than make cost-effective investments in rehabilitating, upgrading or replacing existing infrastructure. This persistent extension of a municipal asset base can undermine sustainable asset management practices particularly if there is not also targeted investment in economic infrastructure that boosts the rate-base. Social infrastructure investment may not be matched by a corresponding increase in own revenues, via tariffs and rates⁷, to fund the operations and maintenance of a new infrastructure asset.*

Furthermore, over-engineering of grant-funded capital projects can also undermine the sustainability of municipal infrastructure.

Local employment opportunities abound.

Under-expenditure in maintenance and under-investment in rehabilitation in the sanitation sector remains a significant challenge in South Africa. This has resulted in the deterioration of assets over time and a breakdown in service provision.

Sanitation service provision in the country needs to be in accordance with sound business principles within a sound subsidy framework. Sound business principles and subsidy framework include adequate spending on maintenance and replacement of assets and income (including subsidies) which covers expenses.

6.6 POSITION 17: APPROPRIATE SANITATION TECHNOLOGIES

Policy Positions

Criteria for appropriate sanitation technology will be developed and will be considered in the water use authorisation application.

The Minister will develop norms and standards for appropriate, alternative technologies.

Settlement appropriate sanitation technologies which minimise natural resource use are encouraged.

Implementation of alternative, appropriate technology will be within social, environmental and economic constraints. Settlement and geographic situation will also be considered.

Appropriate, alternatives technologies need to address the needs of vulnerable people.

A formal process for certification and accreditation of appropriate sanitation technologies will be developed by the department.

6.6.1 Problem Statement

Settlement type and patters have important implications for the type of sanitation technologies that are suitable, affordable and sustainable in a given settlement area.

The debate related to the appropriateness of a sanitation technology centres largely around settlement types, previous experience with inappropriate technologies, the lack of a formal mechanism for accreditation and certification of appropriateness of a technology, the difficulty in determine appropriateness which is largely site specific and current international best practice of appropriate sanitation technologies. Currently, selection of sanitation technologies for an area is largely based on the guidelines for the levels of services in the country, with flush systems being the norm in formal settlements and dry, on-site system being provided in the rural areas of the country. However, experience has shown that these selections of technologies are often not the most appropriate for the area in which they are currently provided.

The policy needs to address the issue of appropriate technology and change preconceived notion of sanitation from either waterborne in urban and dry systems in rural areas to one where the most appropriate technology is provided to an area. Technology choice needs to be based on resource availability within a settlement area.

6.6.2 Current policy and legislative position

The SFWS has the vision that all people living in South Africa have access to adequate, safe, **appropriate** and affordable water and sanitation services, use water wisely and practise safe sanitation. It does not however expand as to what is deemed appropriate or how a WSA should determine an appropriate water and sanitation services.

6.7 POSITION 18: ECONOMICALLY AND FINANCIALLY SUSTAINABLE SANITATION**Policy Positions**

Recognising that sanitation has economic value

User and polluter pays principles will be implemented, regulated and enforced.

Hygiene education is part of the basic sanitation subsidy and financial implementation must be monitored.

Sanitation revenue allocations must be priorities for sanitation service provision.

Economic regulation will be applied throughout the water and sanitation value chain.

The Minister will provide norms and standards for water tariffs.

6.7.1 Problem Statement

Due to the range of different institutions involved in the water value chain, sanitation economic regulatory approaches and mechanisms are different and/or applied differently for the different types/categories of water service institutions.

6.7.2 Current policy and legislative position

The 2003 Strategic Framework for Water Services mandates DWA, as the national water services regulator, to regulate water supply and sanitation services authorities in terms of economic regulation. This includes review of the appropriateness of investment decisions of water services providers and tariffs and review of the efficiency of water service provision.

The 2003 Strategic Framework for Water Services also mandates DWA to undertake the direct economic regulation of water boards and regional water services providers, with a view to protecting consumer and public interests.

6.8 POSITION 19: WATER STEWARDSHIP FOR SANITATION**Policy Positions**

Recognising that sanitation must include water stewardship

Stakeholders must take ownerships of water used for sanitation

Water minimisation in sanitation will be encouraged

6.8.1 Problem Statement

The sanitation sector largely operates on a principle of 'flush and forget', utilising large volumes of water to deal with human waste. Individuals do not take responsibility for their water use for sanitation. There is a need to individuals to collectively take stewardship of water which is used in the sanitation sector.

According to the Alliance for Water Stewardship, stewardship entails taking care of a shared resource, using approaches that focus on the management of public goods such as freshwater resources. The Alliance for Water Stewardship defines water stewardship as

"The use of water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site and catchment-based actions. Good water stewards understand their own water use, catchment context and shared risk in terms of water governance, water balance,

water quality and important water-related areas; and then engage in meaningful individual and collective actions that benefit people and nature¹."

Water stewardship is based on the premise that we are all accountable for the sustainable management of water resources and are, therefore, collectively responsible. Key to water stewardship, is the need to manage water resources to ensure that these water resources are sustainable.

Stewardship requires that the water conservation and demand management policy, which is already in place or which has been recommended, be implemented and adherence to i.e. compliance needs to be enforced. Water stewardship may not only require implementation of water policy and enforcement of compliance but also alignment of strategies internally and with other institutions in the sector. Water stewardship will also require significant behaviour change in the sanitation sector, specifically in terms of empowerment of stakeholders and increasing their awareness of water stewardship for sanitation.

7 References

Alliance for Water Stewardship. [Online]. Available: <http://www.allianceforwaterstewardship.org/>

CSIR (2011). Municipal waste management - good practices. Edition 1. CSIR, Pretoria.

DWA (2010). Free Basic Sanitation Implementation Strategy. [Online]. Available: <https://www.dwaf.gov.za/Documents/FBW/FBWImplementStrategyAug2002.pdf>

DWA (2010). National Water Services Regulation Strategy (NWSRS) (January 2010). Department of Water Affairs: Pretoria, South Africa

DWA (2011). Policy Document Water Services On Privately Owned Land October 2011

DWA (2012). Draft National Sanitation Policy. Department of Water and Sanitation: Pretoria, South Africa

DWAF (1994). White Paper on Water Supply and Sanitation. Government Printer: Pretoria, South Africa

DWAF (1997). White Paper on a National Water Policy of South Africa. Government Printer: Pretoria, South Africa

DWAF (2001). Regulations Relating to Compulsory National Standards and Measures to Conserve Water. Department of Water Affairs: Pretoria, South Africa

DWAF (2001). White Paper on Basic Household Sanitation. Government Printer: Pretoria, South Africa

DWAF (2002). Draft White Paper On Water Services. Water Is Life, Sanitation Is Dignity. Draft for Public Comment

DWAF (2003). Strategic Framework for Water Services. Government Printers, Pretoria.

DWAF (2003). Strategic Framework for Water Services. Government Printer: Pretoria, South Africa

DWAF (2008). Draft Sanitation Strategy. [Online]. Available: https://webcache.googleusercontent.com/search?q=cache:59O3Nc2SrVYJ:https://www.dwa.gov.za/dir_ws/wspd/UserControls/DownloadImportFiles.aspx%3FFileID%3D64+&cd=2&hl=en&ct=clnk&gl=za

DWS (2015). MEDIA STATEMENT National Sanitation Indaba. [Online]. Available:

SALGA (2013). Local Government Position on Municipal Response and Backyard Dwellings. Draft Policy Proposal. SALGA: Pretoria, South Africa.

SANS (2012). SANS 10400: National Building Regulations. Online. Available: <https://www.sabs.co.za/>

¹ Taken from <http://allianceforwaterstewardship.org/about-aws.html#what-is-water-stewardship>

- South Africa (1996). South African Constitution. Government Printer: Pretoria, South Africa
- South Africa (1997). Building Standards Act (No. 103 of 1977). Government Printer: Pretoria, South Africa
- South Africa (1998). White Paper on Local Government. Government Printer: Pretoria, South Africa
- Tissington (2011). Basic sanitation in South Africa: A Guide to Legislation, Policy and Practice. SERI, South Africa.
- WHO (2006) Guidelines for the safe use of wastewater, excreta and greywater. [Online]. Available: http://whqlibdoc.who.int/publications/2006/9241546824_eng.pdf?ua=1

DRAFT