

4. INSTITUTIONAL ARRANGEMENTS AND OPERATIONAL ISSUES

4.1 INTRODUCTION

The previous chapter reviewed the legal framework and the legislative gaps and conflicts. The next key step is to review the institutions and role-players involved in water governance. Governance is broader than “government” in that it looks at the roles of all stakeholders in managing water resources. Responsibility and accountability for water resources management does not end with Government institutions, but is the responsibility of all users and dischargers to the resources. These role-players include: the State (National, Provincial, Regional or Local), private sector, non-profit sector, residents, and international role-players. This chapter seeks to understand what the responsibilities of these role-players are, as well as the linkages/interactions between them, and to identify the gaps and conflicts in order for the Action Plan to address them.

4.1.1 Types of Role-players

The State: The National, Provincial and Local governments provide the basic rules of governance (i.e. through legislation) and have the legal and authoritative framework to promote policymaking. The State (in each sphere) can be both a polluter as well as a problem solver. Its role as polluter emerges through its land use policies and its development policies. Its role as problem solver emerges through how it integrates its environmental policies (including water resources management) in all its different departments at different levels of governance – e.g. this IWRM Action plan is cross cutting across various departments and spheres of government. Important State role-players include: the Department of Water Affairs (DWA) (especially Western Cape Regional Office i.e. DWA:RO), the Provincial Department of Environmental Affairs and Development Planning (DEA&DP), Department of Agriculture, Forests and Fisheries (National and Provincial spheres), Department of Provincial and Local Government (DPLG), Department of Public Works (DPW), *etc.*

Parastatals, Quasi-government and State-funded initiatives: play an important role in policy making and policy implementation, as the other role-players will look to these actors as examples for compliance to policies and implementation of the State’s legal and authoritative framework. The State-funded initiatives are also viewed as implementing mechanisms, such as the “*Working for...*” programmes, or as supporting mechanisms to assist the State develop their frameworks, such as the Water Research Commission (WRC). Quasi-government would include the CMAs.

The private sector: The private sector – from small-scale (small and medium enterprises, SMEs) to large scale – have a very influential role as actors in policy-making. The small and medium enterprises are critical for the economy. In developed countries they are often part of the formal economy; in developing countries they may be part of the informal economy. SMEs are often so small in size that it is very difficult for them to invest in environmentally friendly behaviour; however, sometimes their very size makes them more eco-friendly. Large industry, by definition, uses more resources and has more waste and is often seen as the problem by environmentalists. However, large industries also have the resources to make their production processes more environmentally friendly.

The Non-Profit Sector: the non-government organisation (NGO) sector which also includes non-profit organisations (NPOs) and community based organisations (CBOs), espouses a number of causes such as developmental, social, and environmental needs and rights. This sector is often very influential in pushing its problem definition and its solutions on to society using a range of techniques at its disposal – lobbying legislators, public awareness campaigns, advocacy *etc.* NGOs play an important role in holding all stakeholders accountable, including themselves. Important NGOs in the province include The Wildlife and Environment Society of South Africa (WESSA), and the World Wildlife Fund (WWF).

The residents: The individual residents of a region also influence the policymaking process through their votes, public protests and public demands. In South Africa in general, national politics is particularly sensitive to previously disadvantaged groups – such as women, youth, local communities and indigenous peoples, thereby ensuring participation and engagement of all stakeholders.

International actors: domestic activities of countries are no longer isolated from international influences. The most direct influence stems from international environmental agreements which impact on local policy; however, there are more subtle influences as well. International environmental NGOs have a major impact on domestic policy processes. Aid agencies and Development Banks have influenced national policymaking through the process by which aid is provided to countries and projects. Multinational corporations often shape or pre-empt policies in countries through their behaviour, business models and internal policies. Important international actors include SADC and international funding agents such as the World Bank, EU Water Initiative (EUWI), Swedish International Development Agency (SIDA), African Development Bank (AfDB), etc.

Having outlined the categories of role-players involved in water resources governance, it is also important to understand their relations to each other, before describing them in detail. These relations are illustrated in **Figure 4.1.1**.

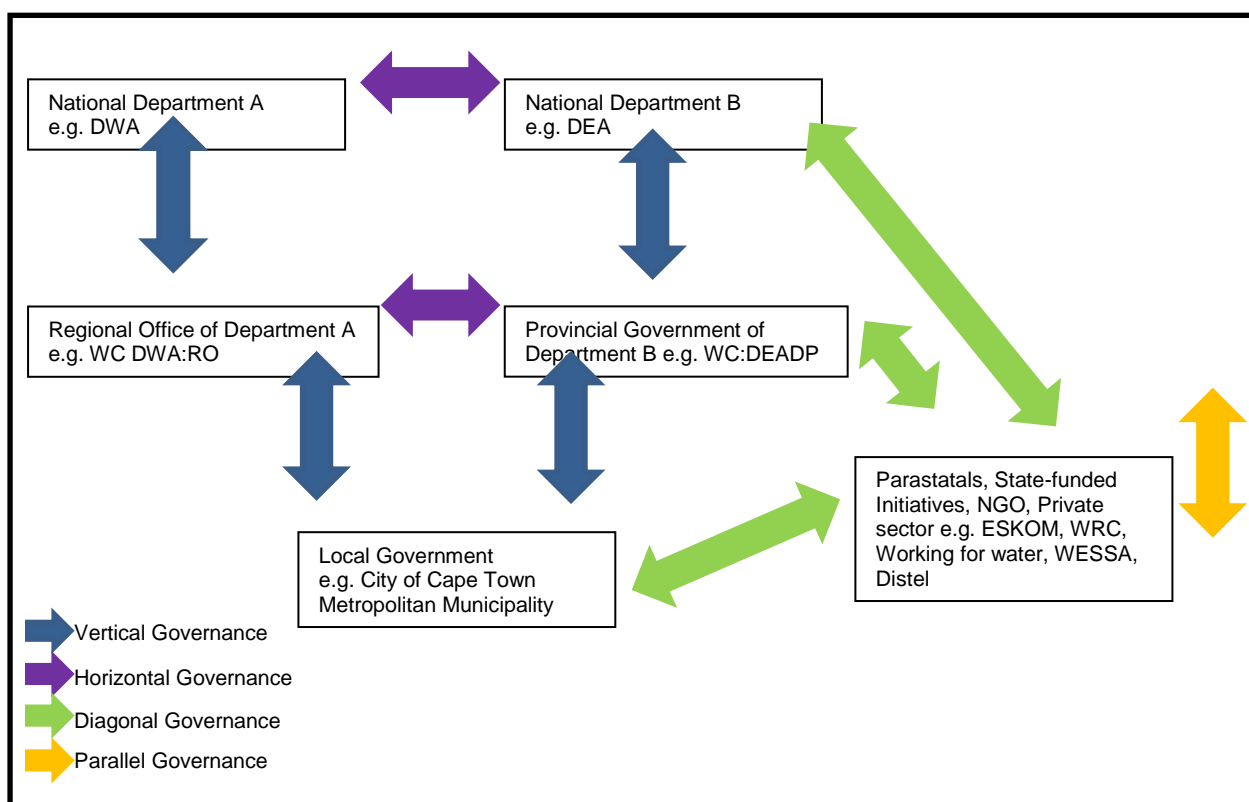


Figure 4.1.1 Conceptual illustration of different relations in governance.

Note:

Horizontal governance refers to the relationships between different units at the same level of governance;

Vertical governance relationships refer to the relation between different hierarchic levels of governance;

Diagonal governance refers to the relationship between State and non-state actors in governance, often leading to co-regulation;

Parallel governance refers to self-regulatory attempts at governance by non-state actors. This leads to codes of practice by business, or eco-labelling schemes.

On an issue by issue basis, role-players may be involved or interested to varying degrees, e.g. From a seller's perspective, buyer's perspective, third party support, third party victim, payer, etc., see

Table 4.1.1. These interests may change between issues, and roles may be reversed between issues.

Table 4.1.1 Types of stakeholder interests (Source: Mansley et al¹, 2002)

Interest	Definition
Seller interest	Interests of the person selling the idea / technology / service
Buyer interest	Interests of the purchaser of the idea / technology / service
Third party supporter interest	Interests of those parties supporting the idea /technology / service
Third party victim interest	Interests of those parties negatively affected by the idea / technology / service
Payer interest	Interests of those parties that have a role in financing the idea/technology or service (funding agents)

When compiling the Action Plan and identifying role-payers for the various tasks, the above-mentioned roles, relations in governance, and interests of role-players must be considered, especially when considering accountability and jurisdiction of influence of role-players. The following sections outline in more detail each of the role-players involved in the Western Cape in relation to water resources governance.

The various statutes allocate different competencies to the different spheres of government and state-funded initiatives. The next sections identify the institutional arrangements for various themes related to water. At the end of each theme, the sub-heading “Operational Issues” draws out the problem areas related to that particular theme.

4.2 WATER RESOURCES MANAGEMENT

Water Resources management begins with Section 24 of the Bill of Rights in the South African Constitution. Section 24 states that *everyone has the right –*

- (a) *To an environment that is not harmful to their health or well-being; and*
- (b) *To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that –*
 - a. *Prevent pollution and ecological degradation;*
 - b. *Promote conservation; and*
 - c. *Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.*

The National Water Act, Act 36 of 1998 (NWA), gives effect to the protection, management and sustainable utilisation of water resources as outlined in the constitution. The objective of the NWA is:

to ensure that the nation’s water resources are protected, used, developed, conserved, managed and controlled in ways which take into account amongst other factors –

- (a) *Meeting the basic human needs of present and future generations;*
- (b) *Promoting equitable access to water;*
- (c) *Redressing the results of past racial and gender discrimination;*
- (d) *Promoting the efficient, sustainable and beneficial use of water in the public interest;*

¹ Mansley M., E.Martinot, T.Onchan, D.Ahuja, W.Chantanakome, S.DeCanio, M.Grubb, J.Gupta, L.Junfeng, M.Hedger, B.Natarajan, J.Turkson, D.Wallace (2000). Enabling Environments for Technology Transfer. *Special Report on Technology Transfer*, Inter-governmental Panel on Climate Change, Cambridge University Press, 105-141.

- (e) Facilitating social and economic development;
- (f) Providing for growing demand for water use;
- (g) Protecting aquatic and associated ecosystems and their biological diversity;
- (h) Reducing and preventing pollution and degradation of water resources;
- (i) Meeting international obligations;
- (j) Promoting dam safety;
- (k) Managing floods and droughts,

and for achieving this purpose, to establish sustainable institutions and to ensure that they have appropriate community, racial and gender representation.

The Department of Water Affairs, which falls within the ambit of the Ministry of Water and Environmental Affairs is mandated by the NWA. The Act goes on to explain that *the water resources of the Republic are held in trusteeship by the Minister. S.3(2) Without limiting subsection (1), the Minister is ultimately responsible to ensure that water is allocated equitably and used beneficially in the public interest, while promoting environmental values. S.3(3) The National Government, acting through the Minister, has the power to regulate use, flow and control of all water in the Republic.* The Minister of Water Affairs and Environment, is the political head of the Department of Water Affairs, and ultimately accountable for the management of our water resources.

The NWA makes provision for various institutional bodies, responsible for various scales, and aspects of water resources management, as illustrated in **Figure 4.2.1**. These include:

- Advisory Committee to the Minister;
- International Water Management Institutions (International Bodies);
- Catchment Management Agencies;
- Water User Associations; and
- Department of Water Affairs National and Regional Offices.

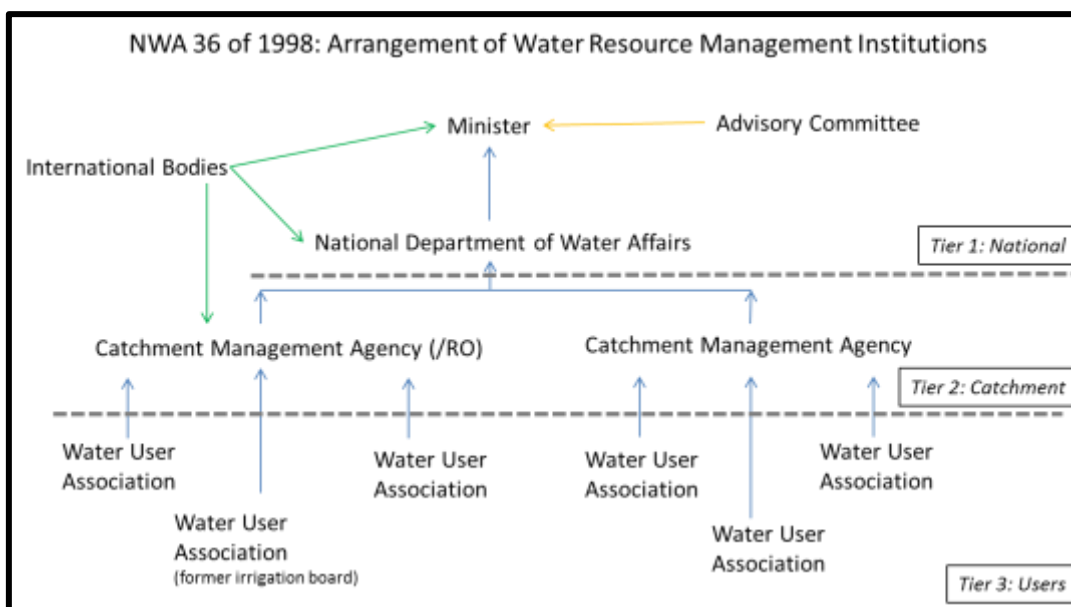


Figure 4.2.1 Interaction between water resource management institutions.

Each of the institutions is also responsible for developing various strategies and plans. The “interaction” of these strategies and plans is illustrated in **Figure 4.2.2**.

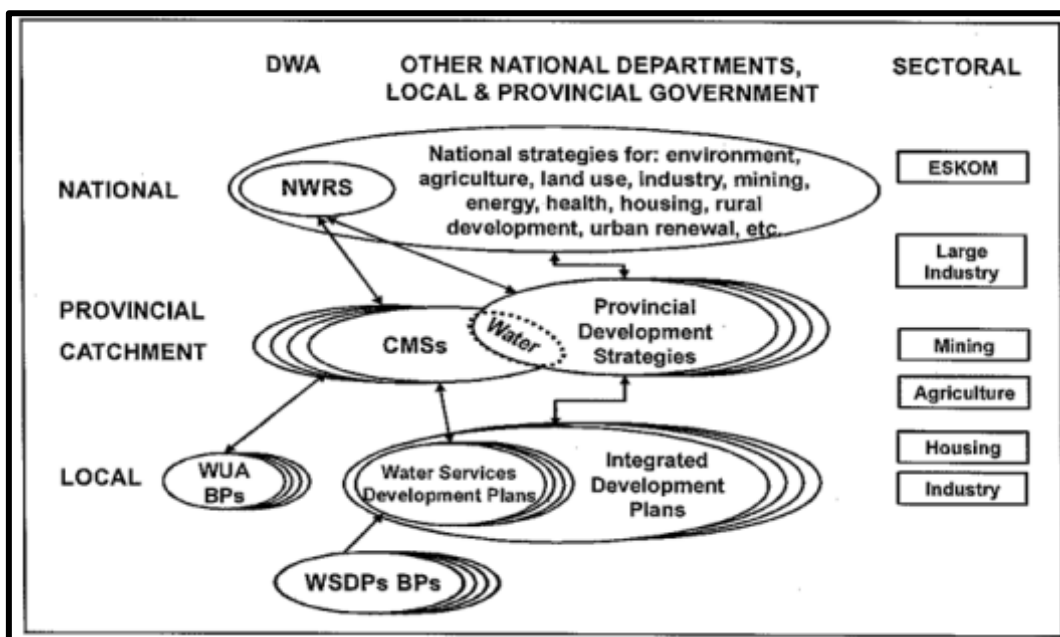


Figure 4.2.2 "Interaction" of institutional plans and strategies across the institutional scales.

4.2.1 Advisory Committees

According to section 99 of NWA, each advisory committee is established for a particular purpose, and it is therefore possible for a variety of advisory committees to be established with different purposes and functions. The advisory committees are tasked with advising the Minister on particular technical matters, for example Acid Mine Drainage.

4.2.2 International Water Management Institutions

South Africa shares seven watercourses with her neighbouring countries. In order to ensure cooperative government and sustainable utilisation of these transboundary water resources, South Africa is signatory to various international agreements governing the transboundary resources. Meeting international obligations in terms of these agreements is afforded the seconded highest priority, after meeting the Reserve (both Human Basic Need and Ecological Reserve requirements), as set out in the National Water Resources Strategy 2004. In order to implement international agreements in respect of the management and development of water resources shared with neighbouring countries and on regional co-operation over water resources, the NWA makes provision for the establishment of International Water Management Institutions. The functions of which may be performed outside the Republic. The existing international water management bodies, established under the Water Act of 1956, are still operational. The Trans-Caledonian Tunnel Company (TCTA, between Lesotho and South Africa) and the Komati Basin Water Authority (KOBWA, between Swaziland and South Africa) are examples of these International Water Management Institutions.

The Western Cape region is not directly subject to any of the existing international agreements or International Water Management Institutions. However, South Africa is signatory to international water legislation and policy, such as the 1997 UN Convention on the Non-navigable Use of International Watercourses, and the UN Convention to Combat Desertification. The principles of which must filter through DWA's policies and strategies. These international statutes will be discussed in more detail in the subsequent chapter on Existing Strategies and Plans.

4.2.3 Catchment Management Agencies

One of the major changes between the Water Act of 1956, and the NWA, has been the decentralisation of water resources management to regional scale resource management. The NWA makes provision for this through the identification of Water Management Areas (WMAs) and the respective establishment of Catchment Management Agencies responsible for the management of the identified WMAs. 19 WMAs have been identified throughout South Africa, as shown in Chapter 2.

The NWA identifies the initial functions of CMAs to be:

S.80 Subject to Chapter 2 and section 79, upon the establishment of a catchment management agency, the initial functions of a CMA are –

- (a) To investigate and advise interested persons on the protection, use, development, conservation, management and control of the water resources in its water management area;*
- (b) To develop a catchment management strategy;*
- (c) To co-ordinate the related activities of water users and of the water management institutions within its water management area;*
- (d) To promote the co-ordination of its implementation with the implementation of any applicable development plan established in terms of the Water Services Act, 1997 (act 108 of 1997); and*
- (e) To promote community participation in the protection, use, development, conservation, management and control of the water resources in its water management area. (Act 36 of 1998).*

Powers of enforcement (s.19, s.20) are to be delegated later. (s.73 delegation).

The CMAs are ultimately responsible for the management of water resources within the WMAs. However, where CMAs have not been established, the Department of Water Affairs Regional Offices (DWA:ROs) will carry out the management of those Water Management Areas, as proto-CMAs. Ultimately the CMAs will be responsible for issuing Water Use Licences, however, the delegations to do so have not yet been handed over to the CMA and proto-CMAs. CMAs are Quasi-government role-players, in that they receive funding from the State, yet the board includes both government and non-government representation.

Only one CMA has been established in the Western Cape so far, and that is the Breede-Overberg CMA (BOCMA). This took place in 2005, and it was the second CMA to be established in the country. The other CMA established in the country so far is the Inkomati CMA.

Both the Gouritz and Olifants/Doorn CMAs have been gazetted but the boards still need to be determined. The Berg CMA was in the process of finalising the sectors to be included in the board when the process of CMA establishment was halted by the DWA National Office. The proposed way forward on the establishment of CMAs, is to merge the Gouritz and Breede WMAs and the Olifants-Doorn and Berg WMAs, so that there will be two CMA's in the Western Cape. Therefore the Gouritz and Olifants-Doorn WMAs will not necessarily become individual CMA's, but will rather merge with the pre-existing CMA's and benefit from their experience and structures but be managed by the CMA board as individual Water Management Areas. However, if the process is approved, then the Western Cape has only 18 months to complete the CMA establishment process, which will include public meetings, establishing advisory committees and boards, etc.

Once established, the CMAs must progressively develop a Catchment Management Strategy (CMS) for the water resources within its water management area. Until such time as the CMSs are compiled, the Internal Strategic Perspectives (ISPs) will be the guiding strategies for the WMAs. The CMS must:

- Include a water allocation plan;
- Set principles for allocating water to existing and prospective users;
- Take into account all matters in terms of the protection, use, development, conservation, management and control of water resources;

- Be in harmony with the national water resources strategy;
- Must consult all stakeholders within its water management area; and
- Be reviewed every five years.

Only the Breede-Overberg CMA has developed a CMS within the Western Cape. This will be reviewed in the subsequent chapter on Existing Strategies and Plans.

The BOCMA currently receives some budget from the DWA, and only 1/3 of the budget is comprised from water tariffs paid by water users in the catchment. The tariffs are subject to the National Tariff Policy. Currently, the tariffs set are too low for the CMA to cover all costs with income derived only from the tariffs. The National Treasury will need to step in to make up the shortfall. Similar constraints are expected with the establishment of the other CMAs.

4.2.3.1 Catchment Management Forums

Within each of the CMAs or proto-CMAs there are regular Catchment Management Forums between the residents, water users, industry and the CMA (or proto-CMA). This forum provides the opportunity for issues to be raised and discussed and for the CMA to provide feedback to its members.

4.2.4 Water User Associations

Although Water User Associations (WUAs) are water management institutions their primary purpose, is not water resource management, rather water use management. They operate at a restricted localised level, and are in effect co-operative associations of individual water users who wish to undertake water-related activities for their mutual benefit. A WUA may exercise management powers and duties only if and to the extent these have been assigned or delegated to it. Although WUAs must operate within the framework of national policy and standards, particularly the National Water Resource Strategy, the Minister may exercise control over them by giving them directives or by temporarily taking over their functions under particular circumstances. Existing Irrigation Boards, Subterranean Water Control Boards and Water Boards established for stock watering purposes as per the Water Act of 1956, are recognised until they are re-structured as WUAs. In terms of section 98 of NWA, Irrigation Boards must be transformed to WUA's. It is DWA's mandate to transform Irrigation Boards (and other water boards) to WUA's and to establish WUA's in areas where water resource management is needed. There are areas where there is no Irrigation Board or WUA currently operating, and DWA have identified the more critical areas where a WUA must be established.

To date DWA has established 38 WUA's in the Western Cape, which includes transformed Irrigation Boards and newly established WUA's (where a request was made to the Department to establish a WUA in a particular area). However, there are still many Irrigation Boards that must be transformed to WUA's, of which 15 are located in the Berg WMA, 30 in the Breede CMA, 18 in the Gouritz WMA and none in the Olifants/Doorn WMA.

According to Schedule 5 of the NWA, The principal functions to be performed by a WUA in its area of operation are –

- *To prevent water from any water resource being wasted;*
- *To protect water resources;*
- *To prevent any unlawful water use;*
- *To remove or arrange to remove any obstruction unlawfully placed in a watercourse;*
- *To prevent any unlawful act likely to reduce the quality of water in any water resource;*
- *To exercise general supervision over water resources;*
- *To regulate the flow of any watercourse by –*
 - *Clearing its channel;*
 - *Reducing the risk of damage to the land in the event of floods;*
 - *Changing a watercourse back to its previous course where it has been altered through natural causes;*

- *To investigate and record –*
 - *The quantity of water at different levels of flow in a water course;*
 - *The times when; and*
 - *The places where water may be used by any person entitled to use water from a water resource;*
- *To construct, purchase or otherwise acquire, control, operate and maintain waterworks considered to be necessary for –*
 - *Draining land; and*
 - *Supplying water to land for irrigation or other purposes;*
- *To supervise and regulate the distribution and use of water from a water resource according to the relevant water use entitlements, by erecting and maintaining devices for –*
 - *Measuring and dividing; or*
 - *Controlling the diversion of the flow of water.*

In terms of water resource management conducted by WUA's, they all perform the same functions, based on their approved constitutions. This is clearly stipulated in their approved constitutions in terms of their powers and functions that are being requested to be delegated by the Minister to the WUA, and under sections 4 and 5 of their approved constitutions. Powers and functions delegated by the Minister in terms of water resource management will only differ when there is a government scheme involved in the operational area of the WUA.

Water User Associations operating in the Western Cape Province are summarised in **Annexure B Water User Associations of the Western Cape**.

4.2.5 The Department of Water Affairs (DWA: National & Regional)

The Department of Water Affairs is the custodian of South Africa's water resources. It is primarily responsible for the formulation and implementation of policy governing this sector. Schedule 4 and 5 of the Constitution, Act 108 of 1996, outlines the functional areas of concurrent and exclusive national, provincial and local government competence. With regards to water resources management, *Environment*, of which water is an element, is a concurrent function of National and Provincial government (Schedule 4, Part A). The roles of the National office are extended to the provinces by means of the Regional Offices.

4.2.5.1 DWA National Office

The National Office is responsible for the issuing of section 21 and 35 water use licences, development of new or maintenance of existing water resource infrastructure, information management, and integrated water resources management planning, regulation and overseeing water services. The National Department of Water Affairs is responsible for developing national strategies, e.g. National Water Resources Strategy (2004), priorities and guidelines e.g. National Water Quality Guidelines for Agricultural, Recreational and Domestic use. The Water Services Directorate oversees the implementation and operation of the Water Services Act, to be discussed further in the next section.

4.2.5.2 DWA Regional Office

Within the Regional Office, there are three WMAs (i.e. Berg, Olifants/Doorn, and Gouritz) which operate as the Proto-CMAs. The Breede-Overberg CMA has already been established and no longer sits within the Regional Office. Within these Proto-CMAs there is a Catchment Manager and two sub-sections, i.e. Water Quality, and Water Use, which, amongst others, carry out compliance monitoring functions (including of WWTWs). In the Regional Office there are also the following sub-directorates:

- WARMS – Water Use Authorisation Registration Management System (WARMS) is essentially the maintenance and management of the regional dataset of all licences, permits,

general authorisations etc. relating to water use. The WARMS must regularly be updated and integrated with the National WARMS database.

- Regulation/Licensing – This unit provides recommendations for General Authorisations; and provides comments on water use licence applications to the National Office. This Directorate is also responsible for regulation and enforcement activities.
- Institutional Operations – which mostly deal with the transformation of the WUAs.
- Natural Resource Management, which assists with monitoring for the River Health Programme, by monitoring the discharges of the WWTWs and compiling the Reserves for the Region's WMAs.

One of the problems experienced in the Regional Office with the establishment of the BOCMA, was that many of the experienced staff with institutional memory were moved from the DWA:RO to the BOCMA. One of the constraints to BOCMA, is that these staff are trained in various fields (e.g. engineering, ecology), but are now having to carry out IWRM functions with which they may not yet be familiar.

Currently the Regional Office has an approximate vacancy of 70% (pers. comms.). A new structure was approved, in particular for the proto-CMAs, of between 30 and 34 staff per WMA. Of these 12-15 posts are actually funded and the remaining 15-18 posts are currently unfunded. Of this, between 3-5 posts are actually filled with existing staff members. The main obstacle to filling these vacancies is the Occupation Specific Dispensation (OSD), which will be discussed further in the next section on Operational Issues.

A further obstacle to the Regional Office has been the shuffling of areas included or excluded from their jurisdiction. In 1997, the area of jurisdiction of the Western Cape Regional Office included the WMAs within the province. In 2002, this was shuffled into cluster regions. The impact has been the moving of the Southern Cape Region (areas of the Gouritz WMA) between the Western and Eastern Cape Regional Offices. In 2006, this structure was reviewed and has since reverted back to the original WMA inclusions. At the same time, a moratorium on appointing new staff was put in place by DWA National Office and Treasury. Between this and the OSD, the Regional Office is suffering with a lack of capacity to carry out its functions.

The Regional Office has also been responsible for developing the Western Cape Water Sector Plan, which will be discussed in more detail in the subsequent chapter on Existing Strategies and Plans. The Sector plan must tie-in with the National Water Resources Strategy as well as the Internal Strategic Perspectives (ISPs) of the WMAs. This document is not available for public comment yet.

4.2.6 Community Driven Initiatives

4.2.6.1 Adopt-a-River Initiative

The Adopt-A-River initiative is a project driven by the Deputy Minister of Water Affairs' office. The project empowers women who are employed to remove solid waste from the riverbanks. In the Western Cape the project is focused on the Eerste River. The project seeks to expand to include work by Working for Water to remove alien and invasive plants. Further, the solid waste collected can be separated for recycling before the municipality collects for landfill. In the future, the aim is to train women in mini-SASS, such that they can understand and see the state of the rivers in which they work.

4.2.7 Operational Issues

4.2.7.1 Occupation Specific Dispensation

The intention behind Occupation Specific Dispensation (OSD) is to improve government's ability to attract and retain 'skilled' employees through improved remuneration. The idea is that the implementation of OSD will put in place a proper career-pathing model for all occupation categories.

Such a career-pathing model is not an automatic salary increase but rather a forward-planning framework to systematically increase salaries after predetermined periods based on specific criteria such as performance, qualification, scope of work and experience.

While a good initiative, the execution of its implementation is an obstacle. The situation is further complicated by the Public Services Act which requires all public servants to be registered within their profession. The implementation of the OSD has restricted the recruiting of new staff, by means of requiring new staff to be registered within their professions or areas of specialisation. In many instances, this professional registration requires several years of working experience. This limits the suitability and number of available candidates. Further, in-house staff are also required to have professional registration. The knock-on effect from the OSD is that there is currently a back-log of 18 months up to 3 years with some of the professional registration bodies accepting applications for registration. The impacts of the implementation of OSD are not limited to DWA only, but are being felt by all government departments and spheres of government.

4.2.7.2 The Reserve

The National Water Act makes provision for the Reserve. The Reserve includes water for basic human life (BHL reserve) as well as to sustain vital ecosystems (Eco-reserve). There are several obstacles both in determining and in implementing the reserve, in particular the eco-reserve.

1. According to section 98 of the NWA, authorised water use being utilised in the 2 years prior to commencement of the NWA is deemed to be existing lawful use. However, allocations of water made under the previous water regimes were discriminatory in favour of riparian land owners, and discriminatory in terms of race. Further, allocations did not make provision for maintaining the ecological integrity of the ecosystems reliant on the water resources. Also, allocations were not based on a systems approach, i.e. downstream users, or end of pipe users were not considered, e.g. estuaries. The result is that currently water resources are over allocated in many areas throughout the country, even without applying the reserve requirements. These issues are addressed in the Water Reform project. The NWA makes provision for compulsory licencing, which is a process to re-assess these water allocations. This is a very time consuming task, and a very contentious issue. Within the Western Cape, the BOCMA has begun the process of verification and validation of water used during that 2 year period. However, it is still very early in the process.
2. The ecological reserve is determined by the DWA National Office, Natural Resource Management. However, the priorities afforded in the reserve determinations are different between the National office and the Regional Office. Due to budget and capacity constraints the Regional Office cannot carry out the determinations or provide more input into the process. Similarly, the estuary plans (as per the ICM Act) require reserve determinations from DWA in order to be completed, but the Regional office is reliant on the National Office for these reserves.

4.2.7.3 Regulation and Enforcement

The water quality specialists (environmental officers) monitor compliance of WWTWs discharges within their WMAs. When any pollution incidents or fish kills occur, they are the first respondents to investigate. These environmental officers issue NWA section 19 and 20 directives. Where there is no response to these section 19 and 20 letters, or where gross negligence is identified, illegal activities, or constant/recurring non-compliance, then the enforcement unit, Blue Scorpions, are brought in or are the first respondents to investigate. Currently, there are only 2 Blue Scorpions seconded from the National Office to the Regional Office, which means there is a need for prioritising of cases to accommodate the very limited capacity. Further, enforcement needs to follow fairly strict timeframes, which is hampered by two separate units i.e. water quality and enforcement. The environmental officers carry out the first round of administrative enforcement, and only after non-compliance in the first round, is the enforcement team notified. This is a very long process and may count against the Department later in the enforcement action.

4.3 WATER SERVICES AND SANITATION

As per Section 27 of the Bill of rights, s.27 (1) *Everyone has the right to have access to –*

- (1) (b) Sufficient food and water; and*
- (2) The State must take responsible legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights.*
- (3) No one may be refused emergency medical treatment;*

This right to access water is empowered through the Water Services Act, Act 108 of 1997 (WSA). The main objectives of this Act are to provide for:

- (a) The right of access to basic water supply and the right to basic sanitation necessary to secure sufficient water and an environment not harmful to human health or well-being;*
- (b) The setting of national standards and norms and standards for tariffs in respect of water services;*
- (c) The preparation and adoption of water services development plans by water services authorities;*
- (d) A regulatory framework for water services institutions and water services intermediaries;*
- (e) The establishment and disestablishment of water boards and water services committees and their duties and powers;*
- (f) The monitoring of water services and intervention by the Minister or by the relevant Province;*
- (g) Financial assistance to water services institutions;*
- (h) The gathering of information in a national information system and the distribution of that information;*
- (i) The accountability of water services providers; and the promotion of effective water resource management and conservation.*

Schedule 4 and 5 of the Constitution, Act 108 of 1996, outline the functional areas of concurrent and exclusive national, provincial and local government competence. With regards to water services, storm water management systems in built-up areas; water and sanitation services limited to potable water supply systems and domestic waste-water and sewage disposal systems, are a function of Local Government (Schedule 4, Part B), and regulated by the Department of Water Affairs National Office.

In implementing the objectives of this Act, the WSA identifies several water services institutions, illustrated in **Figure 4.3.1**, including:

- Water Boards;
- Water Services Authority;
- Water Services Provider;
- Water Service Intermediaries;
- Water Services Committees.

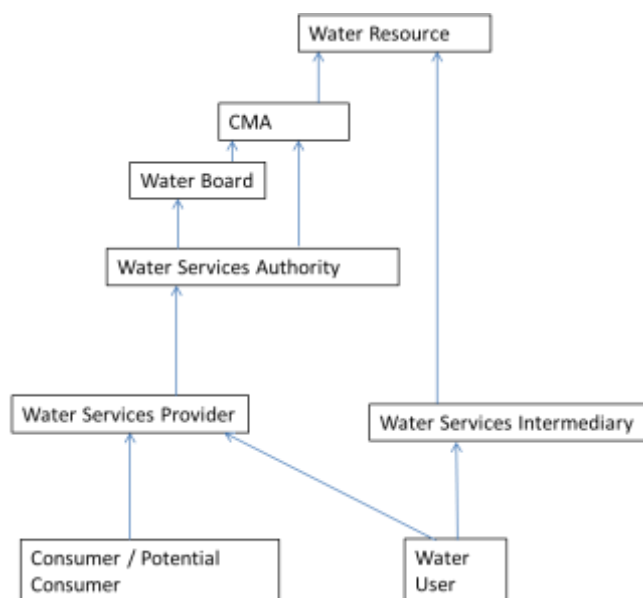


Figure 4.3.1 Reporting structure of Water Service Institutions.

4.3.1 Water Boards

A water board is a public water services provider. It is established by the Minister. The primary activity of a water board is to provide water services to other water services institutions within its service area, i.e. it provides the link between the water resource and the water supply system. They operate dams, bulk water supply infrastructure, some retail infrastructure and some wastewater systems. Depending on the nature of the water resource, the Water Board would require a section 21 water use licence for *taking water from a water resource*. In terms of Section 34(1) of the WSA, *in performing its activities, exercising its powers and carrying out its duties a water board must achieve a balance between –*

- (a) *striving to provide efficient, reliable and sustainable water services;*
- (b) *optimally using available resources;*
- (c) *striving to be financially viable;*
- (d) *promoting the efficiency of water services authorities;*
- (e) *taking cognisance of the needs of water services institutions, consumer and users;*
- (f) *taking into account national and provincial policies, objects and developments;*
- (g) *acting in an equitable, transparent and fair manner;*
- (h) *complying with health and environmental policies; and*
- (i) *taking reasonable measure to promote water conservation and water demand management, including promoting public awareness of these matters.*

Water boards may carry out secondary activities so long as they don't interfere with the primary function of supplying water to other institutions, or create financial problems for the board. Secondary activities may include:

- Providing management services, training and other support services;
- Supplying untreated water to end users who do not use the water for household purposes;
- Providing catchment management services;
- With the approval of the water services authority:
 - Supplying water directly for industrial use;
 - Accepting industrial effluent; or
 - Acting as a water services provider to consumers;
- Providing water supply and sanitation services in a joint venture with water services authorities; and
- Performing water conservation functions.

Water Boards are important in determining the need for new resource development as well as infrastructure development. They potentially could play an important role in ensuring WCDM initiatives are implemented prior to identifying new resources, by monitoring demand and detailed demand analysis. However, supplying water to the Water Services Authorities is their income stream, and a reduction in water supply will have a financial impact on them.

The only Water Board operating in the Western Cape Province is Overberg Water.

4.3.2 Water Services Authorities

A water services authority is any municipality (only a municipality no other institution) responsible for ensuring access to water supply and sanitation services. It may be a Category A (Metropolitan), Category B (Local – if authorised by the Minister of Provincial and Local Government) or Category C (District) municipality. In terms of Section 11(1) of the WSA, *every water services authority has a duty to all consumers or potential consumers in its area of jurisdiction to progressively ensure efficient, affordable, economical and sustainable access to water services.*

(2) *This duty is subject to –*

- a) *The availability of resources;*
- b) *The need for an equitable allocation of resources to all consumers and potential consumers within the Authority's area of jurisdiction;*
- c) *The need to regulate access to water services in an equitable way;*
- d) *The duty of consumers to pay reasonable charges, which must be in accordance with any prescribed norms and standards for tariffs for water services;*
- e) *the duty to conserve water resources;*
- f) *The nature, topography, zoning and situation of the land in question; and*
- g) *The right of the relevant water services authority to limit or discontinue the provision of water services of there is a failure to comply with reasonable conditions set for the provision of such services.*

Water Services Authorities in Western Cape are predominantly Local Municipalities with the exception of the following towns where the District Municipality is the Water Services Authority:

West Coast District Municipality (WCDMA01) with the following towns falling within its jurisdiction:

- Nuwerus
- Rietpoort
- Molsvlei
- Stoffkraal
- Kliprand
- Bitterfontein

Eden District Municipality (WCDMA04) with the following towns falling within its jurisdiction:

- Haarlem
- Uniondale

Water Services Authorities must:

- Ensure efficient, affordable, economical and sustainable access to water services for all consumers;
- Make bylaws for, but not limited to, the regulation of water services and sanitation services provision, and water conservation and efficiency, pollution prevention, etc.;
- Prepare a water services development plan; and
- Either carry out the functions of a water services provider itself or, it may enter into a contract or form a joint venture with another water services provider.

Water services development plans must contain details about:

- The physical attributes of the area;
- The size and distribution of the population;
- A timeframe for the plan, including the implementation programme for the following five years;
- Existing water services;
- Existing industrial water use;
- Existing industrial effluent disposed of;
- The number and location of persons who are not being provided with a basic water supply and basic sanitation;
- Water services providers which will provide the water services;
- Contracts and proposed contracts with water services providers;
- Proposed infrastructure necessary;
- The water sources to be used and the quantity of water to be obtained from and discharged into each source;
- The estimated capital and operating costs of those water services;
- Financial arrangement for funding those water services, including the tariff structures;
- Any water services institution that will assist the water services authority;
- The operation, maintenance, repair and replacement of existing and future infrastructure;
- The number and location of persons to whom water services cannot be provided within the next five years, setting out the reasons; and the time frame within which it may reasonably be expected that a basic water supply and basic sanitation will be provided to those persons;
- The existing and proposed water conservation, recycling and environmental protection measures.

The Bulk Infrastructure Task Team Report (BITT Report), reviewed the WSDPs from the Water Services Authorities in the Western Cape Province, therefore these have not been reviewed again for this project. The findings and priorities identified in the BITT Report have been incorporated into this report in the WMA specific chapters. The BITT report is discussed in more detail in the subsequent chapter on Existing Strategies and Plans.

4.3.3 Water Services Providers

A water services provider physically provides the water supply and sanitation services to consumers under contract to the water services authority. This function can be performed by the municipality itself or any other public or private body, such as a water board, a non-governmental organisation (NGO), a community-based organisation (CBO) or a private sector company, with whom it contracts. This also means that Water Services Providers are not limited in their service provision to geographic region or political jurisdiction.

Section 22 (1) of the WSA provides that, *no person may operate as a water services provider without the approval of the water services authority having jurisdiction in the area in question.*

(2) *Any approval in terms of subsection (1) –*

(a) must be for a limited period; and

(b) may be granted subject to conditions.

(3) *Any person who, at the commencement of this Act, was acting as a water services provider without approval from the water services authority having jurisdiction in the area in question, may continue to do so until the expiry of reasonable notice, which notice must not be longer than one year, given by that water services authority –*

(i) that it requires the provider to enter into a contract; or

(ii) that the continuation will be subject to approval as contemplated in subsection (1).

Section 23 *A water services provider must give such information concerning the provision of water services as may reasonably be called for by –*

(a) the water services authority having jurisdiction in the area in the question;

- (b) the relevant Province;
- (c) The Minister; or
- (d) a consumer or potential consumer.

In terms of sanitation provision in the Western Cape, there are 156 Waste Water Treatment Works (WWTWs) currently owned, operated and maintained by the Water Service Providers and Authorities.

4.3.4 Water Services intermediary

Although not a water services institution, A Water Services Intermediary is a person or body which provides water to people as a minor part of some contract. For example a farmer who provides water to farm labourers, landlords of flats who provide water to tenants, or a mine which provides water to people living in company housing and hostels. It only applies where water supply is a specific part of the contract between two parties, namely that there is an obligation to provide water services by one party to the other.

In terms of Section 25 of the WSA,

- (1) *The quality, quantity and sustainability of water services provided by a water services intermediary must meet any minimum standards prescribed by the Minister and an additional minimum standards prescribed by the water services authority.*
- (2) *A water services intermediary may not charge for water services at a tariff which does not comply with any norms and standards prescribed under this Act and any additional norms and standards set by the relevant water services authority.*

As the scope of Water Services Intermediaries is very small, with localised services, these institutions have not been investigated further within this study.

4.3.5 Water Services Committees

A water services committee is a statutory committee that may be established by the Minister should a water services authority fail in its duty. The Minister is not able to establish a water services committee if the water services authority is able to perform its functions effectively.

In terms of Section 52 of the WSA,

- (1) *The function of a water services committee is to provide water services to consumers within its service area.*
- (2) *A water services committee may not unreasonably exclude any person within its service area from those water services.*

According to DWA Regional Office, there are no water services committees in operation in the Western Cape. However, the DWA National Office is investigating this option further in terms of bringing non-compliant WWTWs back into compliance.

In terms of regulating water services, **Table 4.3.1** sets out the roles and responsibilities of water services.

Table 4.3.1 Roles and responsibilities with respect to regulation of water services.

Role	Who	Responsibilities
Constitution of South Africa	Ministers of Water Affairs, and Provincial and Local Government	<ul style="list-style-type: none"> ● To set national norms and standards ● To fill the role of Water Service Authority if service at local level fails ● To provide support to local government in relation to water services

		<ul style="list-style-type: none"> • To legislate with regard to municipal functions (including minimum procurement rules) • To monitor performance
	Municipal government (local sphere)	<ul style="list-style-type: none"> • To be responsible for the provision of basic level of service to all South Africans
Regulator	Minister of Water Affairs	<ul style="list-style-type: none"> • To set minimum levels of service • To set minimum reporting requirements • To set tariff policy • To monitor performance • To encourage regionalisation to achieve economies of scale
Water Services Authority (WSA)	Municipal government	<ul style="list-style-type: none"> • To achieve requirements set by regulators • To balance the needs of stakeholders • To enter into contracts with WSP(s) best able to achieve these requirements • To monitor performance of the WSP in terms of the contract with the WSA • To report to regulators
Water Services Provider (WSP)	Public, private or mixed entities, or municipal government itself	<ul style="list-style-type: none"> • To provide services and perform the duties as required in the contract, the WSA and the Constitution

4.3.6 Operational Issues

4.3.6.1 Planning Cycle and Finances

The conventional long term planning cycle for water resources typically covers a minimum period of 10 years. However, with Municipal cycles only being 3 years, budgetary and infrastructure planning are now only planned over 3 year periods. Usually the financing required for bulk infrastructure cannot be raised within a 3 year period, and thus the municipalities don't have the necessary bridging finance for the infrastructure requirements and require financial support. If the financing had been planned and implemented over the 10 years needed, the municipality would be in a better position to cope. The result is that some essential investment only takes place when there are severe supply problems e.g. Beaufort West, and the municipality then has no option but to turn to Treasury for disaster assistance to fund the infrastructure.

Further, investment in large infrastructure, such as the treatment plant at Beaufort West or the desalination plants along the coast, is extremely expensive, and will absorb a big chunk of the municipal budget, leaving little over for more "visible" achievements which may more strongly evoke political support. Thus, asking treasury for bail outs or using emergency relief funding means the municipality gains the infrastructure from outside of their annual budgets.

A further related issue is that technical staff no longer have sufficient influence over decisions regarding how budgets are spent. Due to the low profile nature of essential WWTWs maintenance and upgrade projects, politicians don't necessarily support them and the budgets are often allocated elsewhere.

4.3.6.2 Disaster Management

A follow on from the abovementioned problems is then felt in terms of environmental impacts, as these are not assessed in detail prior to the implementation of infrastructure. Again, for example the Beaufort West situation was deemed an emergency situation and many EIA requirements were set aside.

However, the supply shortfall risk was well known in advance and full EIA procedures could have been implemented.

Future planning must incorporate the expected effects and impacts of climate change on water supply and demand, and the necessary planning must be taken well enough in advance.

4.3.6.3 Drought Management

Drought is a slow onset phenomenon; it doesn't happen within a few hours such as floods. Therefore drought management requires its own process and procedures. The Department of Agriculture has drafted a Drought Management Plan, however the Local Authorities should also have their own plans and procedures in place to monitor for the onset of drought in their areas of jurisdiction in order to curb or limit the associated impacts. DWA and DEADP should coordinate a process of developing a guideline document for the municipalities to help deal with and manage drought.

4.3.6.4 Water Sector Development Plans (WSDPs)

While a requirement of the planning process, WSDPs usually provide statistical information. Some are sorely lacking information, or are not comprehensive. Part of the problem is that there is no regulation and no accountability against these plans which often results in "wish-listing".

4.3.6.5 All Towns Study

The study aims is to assist the municipalities with their bulk infrastructure planning, such that DWA National Office can plan the long term resource developments. The All Towns Study was based on various sources of information including the WSDPs of the various municipalities. However, as mentioned above, the information in the WSDPs is in many cases insufficient, incorrect, or simply lacking completely. The first draft of the project has been completed and some of the Local Authorities are disagreeing with the findings of the project.

4.3.6.6 Monitoring of water supply to Water Services Authorities *versus* water used

Water provided to the Water Services Authorities (WSAs), either by DWA or by the Water Boards is often not appropriately metered or monitored. Accurate water balances by WSAs are essential in order to verify losses and keep accurate record of bulk supply versus treated reticulation and sales.

4.3.6.7 Water Conservation and Demand Management

Water Conservation and Demand management is cross-cutting across the NWA and the WSA. One of the first problems identified relates to which institution is responsible for regulating WCDM. Local Municipalities can regulate end of tap users, however, there needs to be regulation of the municipalities as the operators of the reticulation systems, in terms of implementing plans and strategies, etc. either by DPLG or DWA National Office. Further, these only address urban efficiencies. Sector efficiencies need to be regulated in terms of the NWA, either by the CMAs or DWA Regional Offices.

A second problem lies within job descriptions. There is no clear existing WCDM job description at local municipalities who are responsible for the implementation of WCDM. There are various engineers and technicians whose primary focus is on infrastructure operation and maintenance but they are fully occupied in attending to their day-to-day duties.

It must also be remembered that WCDM is not 'one size fits all.' WCDM must be adapted to the economic situation and geographic location of the municipalities. Therefore, implementation action plans will differ between municipalities. Similarly in promoting WCDM awareness, different audiences will need to be catered for.

WCDM is discussed in more detail in the chapter on Water Resources Management.

4.3.6.8 Water Demand

Municipalities do not appear to be curbing new developments to meet water availability. Cognisance must be taken of the fact that water is not an infinite resource. Before approving new developments, a water balance should be carried out to determine whether there is sufficient supply to meet the additional demand (this is not limited to drinking water, but must include sanitation requirements, production requirements, etc.). Municipal rates and water tariffs are a primary source of income for the Municipality, therefore it may not be in their direct interest to curb development. New developments pay a nominal fee to the municipality towards provision of services; however, this funding is usually inadequate, and is often not used in the upgrading of facilities to cope with the additional supply. The nominal fee goes into municipal budget where it is often used for other payments such as salaries and housing projects.

4.3.6.9 EIAs and water requirements

The EIA process is managed at a provincial level, yet applications are site-specific, therefore adjacent properties intending to carry out the same (or similar) activities must still each individually conduct all of the same studies. In some areas Environmental Management Frameworks (EMFs) have been carried out, but full EIA applications are still required within these areas, instead of rather applying the EMF to limit the detail of the EIA process.

The EIA process must not be undermined by inadequate information. For example, where an EIA is undertaken for a new development, the Local Authority must verify in detail how that new development has been accommodated into their water services planning, in order to ensure that there is sufficient supply available to meet the increased water requirements and capacity at WWTWs.

DWA have in some cases effectively curbed new developments, for example in Swellendam, Grabouw, Villiersdorp, Gansbaai and Worcester, due to lack of sewer capacity to accommodate the new developments. Until such time as these network and treatment works have adequate capacity, these proposed developments will not be allowed.

4.3.6.10 Waste Water Treatment Works (WWTW)

WWTWs, together with other non-point source discharges, are one of the largest contributors to poor water quality of water resources, both in the province and throughout the rest of the country. The key reason for this is non-compliance to discharge permits. There are however, several roots to this problem, including inadequately trained staff, insufficient staff, insufficient funding, inflow exceeding design capacity, budget constraints, expired licences, out-dated regulations etc. These problems will be discussed further below.

4.3.6.11 Staff Competencies

GN 2834, GG 10048 of 27 December 1985, determines the number and level of qualifications required to operate and maintain WWTWs depending on the complexity and size of the works. **Figure 4.3.2** to **Figure 4.3.4** illustrate the Schedules of Classifications of GN 2834.

SCHEDULE II
CLASSIFICATION OF WATER CARE WORKS USED FOR THE PURIFICATION,
TREATMENT OR DISPOSAL OF EFFLUENT OR SEWAGE

Rating					
Class of works	E	D	C	B	A
Range of points	5-9	10-19	20-29	30-39	40-68

Points to be awarded at the discretion of the Director-General in accordance with the following criteria:

		Max
Design capacity (megalitres per day)	Up to 1	1
	1 plus to 5	3
	5 plus to 20	7
	20 plus to 100	12
	Over 100	15
Concentration of raw effluent or sewage, as COD	less than 700 mg/l	1
	700 mg/l and over	3
Process	Preliminary treatment with more than one mechanical item	2
	Primary sedimentation	2
	Anaerobic digestion	2
	Sludge drying beds	1
	Gas utilisation (gasholder, boiler, etc.)	3
	Oxidation ponds (not tertiary treatment)	1
	Biofilters (Biof) or biodiscs	2
	Activated sludge (AS)-any form	6
	Tertiary treatment (e.g. sand filters)	4
	Maturation ponds	2
	Chlorination	3
	Mechanical or physical/chemical sludge treatment including stabilisation and/or dewatering	5
	Nutrient removal (extra to AS or Biof)	3
Complicating factors (gas engines, air filtration, etc.)	5	
Sensitivity of water into which purified or treated effluent is discharged	Low-e.g. ocean or evaporation pond	1
	Medium-e.g. where the General Standard prescribed under section 21 (1) (a) of the Act is applicable or the ocean near a swimming beach	4
	High-e.g. where the Special Standard prescribed under section 21 (1) (a) of the Act is applicable or a trout stream or upstream of a potable water supply	8
Other factors which make the operation more or less complex		5 to -5

Figure 4.3.2 Schedule 2 Classification of water care works for the treatment of effluent. The more complex the works the higher the points.

SCHEDULE III
CLASSIFICATION OF PERSONS (EXCLUDING UNSKILLED LABOURERS)
ACCORDING TO EDUCATIONAL QUALIFICATIONS AND EXPERIENCE TO BE
EMPLOYED FOR THE OPERATION OF WATER CARE WORKS

MINIMUM REQUIREMENTS

Educational class	Years appropriate experience					
	Trainee	I	II	III	IV	V
Std 6	0	-	-	-	-	-
Std 6 plus Maintenance Workers Certificate	0	4	-	-	-	-
Std 7 plus Maintenance Workers Certificate	0	3	-	-	-	-
Std 8 (or NTC I) plus Maintenance Workers Certificate	0	2	5	-	-	-
Std 8 (or NTC I) plus Water and Waste Water Treatment Practice N1						
NTC I in Water and Waste Water Treatment Practice	0	1½	4	-	-	-
Std 8 (or NTC I) plus Operators Certificate	0	1	3	9	-	-
Std 9 (Or NTC II) plus Operators Certificate	0	½	2	7	15	-
NTC II in Water and Waste Water Treatment Practice						
Matric (or NTC III) plus Operators Certificate		0	½	3	8	15
Matric (or NTC III) plus Water Treatment Practice N3						
Matric (or NTC III) plus Waste Water Treatment Practice N3						
NTC III in Water Treatment Practice						
NTC III in Waste Water Treatment Practice						
National Diploma or National Techn. Diploma or NTC VI or 3 yeas B.Sc. (all in appropriate field)				0	2	6
Higher National Diploma or 4 years B.Sc. (both in appropriate field)					0	4
Professional Engineer (Act 81 of 1968) in appropriate field Natural Scientist (Act 55 of 1982 in appropriate field Corporate Member of IWPC					0	3

Apprentices are regarded as equivalent to Std 8 or NTC I

Artisans are regarded as equivalent to Matric or NTC III

Figure 4.3.3 Schedule 3 Classification of persons according to qualifications to be employed for the operation of water care works.

SCHEDULE IV
MINIMUM NUMBER OF PERSONS TO BE EMPLOYED FOR THE OPERATION OF A
WATER CARE WORK

Work class	Class and number of persons as operators	Class of person as supervisor	Class of person for weekly inspection*
E	1 x Trainee	I	II
D	1 x Trainee 1 x I	II	III
C	1 x Trainee 2 x I 1 x II	III	IV
B	1 x Trainee 2 x I 1 x II 1 x III	IV	V
A	1 x Trainee 2 x I 1 x II 1 x III 1 x IV	V	-

Note: These are the minimum requirements for the operation of the various classes of works and do not include maintenance or laboratory personnel.

* If the owner of a water care work has no person of this class employed on that work, he shall appoint a consultant with the required qualifications as prescribed in schedule III in respect to that particular class of person, to visit the work weekly.

Figure 4.3.4 Schedule 4 Minimum number of persons to be employed for the operation of a water care works, based on the Class of the works, as determined from the previous Schedules.

The first problem of GN 2834 is that it was written in terms of the Water Act of 1956, and has not been updated, and does not accommodate changes to qualification requirements, i.e. does not comply with the National Qualification Framework (NQF). Also the GN2834 is very qualification focused and allocates less weighting for experience, competence and skill.

In terms of the current status of the WWTWs in the province in relation to the qualification requirements of the GN, an assessment was carried out using the results of the "First Order Assessment of Municipal Wastewater Treatment Works in the Western Cape Province" DWA, June 2009 (Draft). In order to assess the operational functionality of these plants a scoring system was devised and can be explained in terms of the following five categories:

- 1) Operators
- 2) Supervisors
- 3) Process controller
- 4) Design capacity vs. operational capacity
- 5) Vacancies

Scoring

Personnel

Water purification and wastewater treatment works and Process Controllers are required to be registered according to the relevant legislation (Revised Regulation 17 of the Water Services Act (No. 108 of 1997) / Regulation 2834 under the Water Act of 1956; 1985 Requirements) and the Process Controllers must be licensed according to the Class of water treatment works. The water treatment works must have a site-specific Operator's Manual to guide Process Controllers. (DWA, 2008)

Operators, Supervisors and Process Controllers

Score ranges from zero to ten. Zero being the most desirable and ten being the least desirable. If the number of actual operators employed matches the required, the score is zero. If the number of actual operators doesn't match the requirement, the score is discretionary - in between one to ten. Supervisors and process controllers are also scored accordingly.

Scoring of Operators, Supervisors and Process Controllers								
No. of controllers	<2	2 – 4	5 – 7	8 - 10	11 -13	14 - 16	17 - 20	> 20
Score	7	6	5	4	3	2	1	0

Design capacity vs. operational capacity

If a treatment works is operating below its design capacity then it is considered to be running efficiently and thus is scored zero. If the case is opposite in effect, i.e. where the operational capacity exceeds the design capacity a score of five is given.

Scoring of Operational Capacities		
Design = Operational	Design > Operational	Design < Operational
2.5	0	5

Vacancies

Within the wastewater treatment facilities, a number of vacancies may exist with respect to the staffing requirements. If there are a large number of vacancies, it means that it is possible that the plant is not operating as efficiently as is required or it could mean that some staff are being overworked. Thus, an increasing number of vacancies is seen to be a negative quality of the wastewater treatment plants. Following this, with a greater number of vacancies, the plants will attain a higher score since a low score is the most desirable.

Score of Treatment Work Vacancies					
No. of Vacancies	< 2	2 – 4	5 - 7	8 - 10	> 10
Score	1	2	3	4	5

Weighted Score

The vacancies criterion is also subjected to many other factors and simply looking at the vacancies is not sufficient to classify the works as badly operated. The scores attained by each of the plants with respect to the vacancies thus needs to be weighted down to account for the variable nature of the vacancy score.

$$\frac{\text{Score}}{\text{Potential Score}} \times \text{no. of types of posts (e.g. operator, supervisor, process controller)} = \text{weighted score}$$

So if score is 1, weighted score would be calculated as follows:

$$\frac{1}{5} \times 3 = 0.6$$

Five of the district municipalities (DM) of the Western Cape have been scored and the ten worst operating plants of each DM have been listed below. The findings of the 2009 assessment showed that the worst scoring WWTWs was Gordon's Bay. The assessment was not able to cover every single treatment works as there was insufficient data available. **Table 4.3.2** to **Table 4.3.7** indicate the scores of the District Municipalities WWTW competency levels.

Table 4.3.2 City of Cape Town's WWTWs competency scores.

City of Cape Town

Plant Name	Score					
	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Athlone	0	0	3	5	0.6	8.6
Bellville	0	0	0	5	0.6	5.6
Borchards	0	0	1	0	0.6	1.6
Cape Flats	0	0	3	2.5	0.6	6.1
Camps Bay	8	0	7	0	1.2	16.2
Dover	10	10	7	0	1.2	28.2
Gordon's Bay	10	8	7	5	1.2	31.2
Green Point	8	0	6	0	0.6	14.6
Houtbay	10	0	7	0	1.2	18.2
Klipheuwel	10	0	7	0	1.2	18.2
Kraaifontein	7	7	5	5	1.2	25.2
Llandudno	10	0	7	0	0.6	17.6
Maccassar	7	0	6	0	0.6	13.6
Melkbosstrand	4	7	6	0	1.2	18.2
Millers Point	10	0	7	2.5	0.6	20.1
Mitchells Plain	0	0	2	0	0.6	2.6
Oudekraal	10	10	7	2.5	1.2	30.7
Parow	8	0	6	0	1.2	15.2
Philadelphia	0	0	7	0	1.2	8.2
Potsdam	0	0	1	0	0.6	1.6
Scottsdene	0	0	4	5	1.2	10.2
Simory Dam	0	0	6	0	0.6	6.6
Westfleur	0	4	5	0	1.2	10.2
Wildevoevllei	6	2	5	0	1.2	14.2
Zandvliet	0	0	4	0	0.6	4.6

From the above table the ten worst WWTWs competency scores in the City of Cape Town Metropolitan area are;

- 1) Gordon's Bay
- 2) Oudekraal
- 3) Dover
- 4) Kraaifontein
- 5) Millers Point
- 6) Melkbosstrand
- 7) Klipheuwel
- 8) Houtbay
- 9) Llandudno
- 10) Camps Bay

Table 4.3.3 Central Karoo District Municipality's WWTWs competency scores.

Central Karoo	
Plant Name	Score

	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Leeu Gamka	9	6	7	5	0.6	27.6
Klaarstroom	9	6	7	2.5	0.6	25.1
Prince Albert	8	6	6	0	0.6	20.6
Beaufort West	10	10	6	0	0.6	26.6
Merweville	10	9	7	2.5	1.2	29.7
Nelspoort	10	9	7	0	1.2	27.2

In the Central Karoo District Municipal area there are only 6 WWTWs and they are therefore all priorities. In terms of total score, they all scored worse than the City of Cape Town's WWTWs.

Table 4.3.4 Eden District Municipality's WWTWs competency scores.

Eden District						
Plant Name	Score					
	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Albertinia	8	7	7	0	0.6	22.6
Heidelberg	7	8	6	0	0.6	21.6
Calitzdorp	0	8	7	2.5	0.6	18.1
Zoar	8	8	7	0	1.2	24.2
Ladismith	0	0	6	5	1.2	12.2

In terms of the Eden District Municipality, there are only 5 WWTWs, and they are all priority works. Many of the works scored worse than City of Cape Town's WWTWs.

Table 4.3.5 Overberg District Municipality's WWTWs competency scores.

Overberg						
Plant Name	Score					
	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Bredasdorp	3	5	7	0	1.2	16.2
Napier	3	7	7	2.5	1.2	20.7
Struisbaai	3	7	7	2.5	1.2	20.7
Waenhuiskrans	3	7	7	5	1.2	23.2
Barrydale	0	0	7	5	1.2	13.2
Buffelsjags	10	10	7	0	1.2	28.2
Malgas						0
Cape Infanta						0
Suurbrak	10	10	7	0	1.2	28.2
Swellendam						0
Gaansbaai	3	9	7	5	1.8	25.8
Hermanus	9	9	4	0	0.6	22.6
Hawston	10	10	7	0	1.2	28.2

Overberg						
Plant Name	Score					
	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Koorland	10	10	7	2.5	1.2	30.7
Klip Rivier	0	0	7	2.5	1.2	10.7
Kleinmond	8	0	7	0	1.2	16.2
Stanford	10	10	6	0	0.6	26.6
Botrivier	10	10	6	2.5	0.6	29.1
Caledon	10	10	6	0	0.6	26.6
Genadendal	7	10	7	5	1.2	30.2
Grabouw	0	0	7	0	0.6	7.6
Greyton	10	10	7	2.5	1.2	30.7
Riviersonderend	10	10	7	2.5	0.6	30.1
Villiersdorp	7	10	6	5	0.6	28.6

From the above table the eleven (2 tied for 10th place) worst WWTWs competency scores in the Overberg District Municipality are;

- 1) Greyton
- 2) Koorland
- 3) Genadendal
- 4) Riviersonderend
- 5) Botrivier
- 6) Villiersdorp
- 7) Buffelsjags
- 8) Suurbraak
- 9) Hawston
- 10) Caledon
- 11) Stanford

Table 4.3.6 West Coast District Municipality's WWTWs competency scores.

West Coast DM						
Plant Name	Score					
	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Doringbaai	10	8	7	2.5	0.6	28.1
Strandfontein	10	8	7	2.5	0.6	28.1
Klawer	10	8	7	5	0.6	30.6
Lutsville	8	10	7	0	0.6	25.6
Lutsville West	10	8	7	2.5	0.6	28.1
Koekenaap	10	8	7	2.5	0.6	28.1
Ebenhaezer	10	8	7	2.5	0.6	28.1
Vredendal South	8	8	7	0	1.2	24.2
Vredendal North	10	8	7	0	0.6	25.6

West Coast DM						
Plant Name	Score					
	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Van Rhynsdorp	10	8	7	0	0.6	25.6
Langebaan	7	8	6	0	0.6	21.6
Shelly Point	8	8	7	0	0.6	23.6
St Helena Bay	8	8	6	0	1.2	23.2
Hopefield	8	8	6	0	1.2	23.2
Paternoster	8	8	6	0	0.6	22.6
Saldanha	6	7	6	0	0.6	19.6
Vredenberg	6	7	6	0	0.6	19.6
Darling	0	0	7	0	0.6	7.6
Yzerfontein						0
Koringberg	0	0	7	2.5	0.6	10.1
Riebeek Kasteel	0	0	7	2.5	0.6	10.1
Malmesbury	0	0	7	0	1.2	8.2
Mooreesberg	0	0	7	0	1.2	8.2
Chatsworth	0	0	7	2.5	0.6	10.1
Kalbaskraal	0	0	6	2.5	0.6	9.1
Riebeek West	0	0	7	2.5	0.6	10.1

From the above table the ten worst WWTWs competency scores in the West Coast District Municipality are;

- 1) Klaver
- 2) Lutsville West
- 3) Koekenaap
- 4) Strandfontein
- 5) Ebenhaezer
- 6) Doring Baai
- 7) Lutsville
- 8) Van Rhynsdorp
- 9) Vredendal North
- 10) Vredendal South

Table 4.3.7 Cape Winelands District Municipality's WWTWs competency scores.

Cape Winelands District Municipality						
Plant Name	Score					
	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Ashton	7	0	6	0	1.2	14.2
Bonnievale	8	0	7	0	1.2	16.2
McGregor	6	0	7	0	1.2	14.2

Cape Winelands District Municipality						
Plant Name	Score					
	Operators	Supervisor	Process Controller	Design vs. Operational Capacity	Vacancies	Total
Montagu	7	0	6	2.5	1.2	16.7
Robertson	7	0	6	0	1.2	14.2
De Doorn & Orchards	6	0	7	0	1.2	14.2
Rawsonville	7	0	6	0	1.2	14.2
Touwsrivier	7	0	6	0	1.2	14.2
Worcester	8	0	5	0	1.2	14.2
Paarl	9	4	6	0	1.2	20.2
Kliprug	5	3	7	0	1.2	16.2
Saron	10	0	7	0	0.6	17.6
Hermon	6	3	7	0	1.2	17.2
Gouda	10	0	7	2.5	1.2	20.7
Wellington	7	8	7	0	1.8	23.8
Ceres+ Belle Vista	7	0	7	0	1.2	15.2
Op die Berg	0	0	7	2.5	1.2	10.7
Tulbagh	0	0	7	0	1.2	8.2
Wolseley	0	0	7	0	1.2	8.2
La Motte	7	5	6	0	0.6	18.6
Klapmuts	6	3	6	0	0.6	15.6
Pniel etc	8	3	6	0	1.2	18.2
Raithby	0	0	7	5	0.6	12.6
Stellenbosch	6	3	7	0	0.6	16.6
Wemmershoek	8	3	6	0	0.6	17.6

From the above table, the ten worst WWTWs competency scores in the Cape Winelands District Municipality are,

1. Wellington
2. Gouda
3. Paarl
4. La Motte
5. Pniel
6. Saron
7. Wemmershoek
8. Hermon
9. Montagu
10. Stellenbosch

In terms of personnel, high scoring treatment plants are at risk as consequences could involve poor operation and maintenance procedures, which is detrimental to overall management of the plant. It is also concerning that a high percentage of personnel employed in 'skilled' positions, do not comply with the requirements for supervisors (22%) and process controllers (39%). These numbers, combined with the number of vacancies in these positions, amount to a significant number of positions that are not filled by the requisite level of skill. The value of this information is that it places Provincial Government in an ideal position to address this skills gap on an informed, quantified basis, and to formulate a plan

with clear targets, deliverables, timeframes, costs and methodology to address this specific gap (DWA 2008).

4.3.6.12 National Qualification Framework

In 1995, the National Qualification Framework (NQF) was established in order to align the South African education and training systems with those of international standards of best practice. In the same year the South African Qualification Authority (SAQA) was formed to oversee the development and implementation of the NQF in all areas of education and training. In order for SAQA to monitor such management systems, it accredited institutions / statutory bodies called Education and Training Quality Assurers (ETQAs). The auditing and monitoring of water and wastewater related fields is done by the Energy and Water Sector Education and Training Authority (ESETA).

ESETA is responsible for accrediting organizations that provide training to the energy and water divisions. Once ESETA accredits an organization, that organization then becomes recognized as meeting the NQF requirements. **Table 4.3.8** below lists the accredited training providers within the Western Cape. These organizations provide training for the water sector only. Notably, the training currently provided is through the Local Government SETA rather than the ESETA.

Table 4.3.8 NQF accredited training providers within the Western Cape for the water sector.

Name	Contact Person / Telephone / Fax / Email	Province / City	SETA / Status	Water & Sanitation
City of Cape Town - Water	R Francis 021-593 4642 021-593 4876	Western Cape Cape Town	LGSETA Accredited	Water & Sanitation
BECO Institute for Sustainable Business	Bas Kothuis 021-689 7117 021-689 7116 bkothuis@beco.co.za	Western Cape Rondebosch	LGSETA Accredited	Water & Sanitation

There are currently 8 NQF levels and these are divided into 3 groups namely, General Education and Training (GET), Further Education and Training (FET) and Higher Education and Training (HET). The 8 levels are shown in the **Table 4.3.9** below.

Table 4.3.9 NQF grading system.

NQF Level	Description	NQF Category
NQF: One	<ul style="list-style-type: none"> Grade four to Grade Nine (Standard two to Standard Seven) 	GET - General Education and Training
NQF :Two	<ul style="list-style-type: none"> Grade Ten (Standard Eight) 	FET - Further Education and Training
NQF: Three	<ul style="list-style-type: none"> Grade Eleven (Standard Nine) 	FET - Further Education and Training
NQF: Four	<ul style="list-style-type: none"> Grade Twelve (Standard Ten / 	FET - Further Education and Training

NQF Level	Description	NQF Category
	Matric) <ul style="list-style-type: none"> Trade Certificate 	
NQF: Five	<ul style="list-style-type: none"> National Certificate National Diploma Occupational Certificate 	HET: Higher Education and Training
NQF: Six	<ul style="list-style-type: none"> Bachelor's Degree (Three Years) Higher Diploma 	HET: Higher Education and Training
NQF: Seven	<ul style="list-style-type: none"> Honours Degree Post Graduate Certificate 	HET: Higher Education and Training
NQF: Eight	<ul style="list-style-type: none"> Doctorate Masters 	HET: Higher Education and Training

The NQF grading has replaced the NTC grading included in GN 2834 discussed previously.

4.3.6.13 Insufficient staff to operate and/or maintain works

The Local Government: Municipal Finance Management Act 56 of 2003 (MFMA) requires the appointment of several key personnel, i.e. the accounting officer, the chief financial officer, all senior managers responsible for managing respective votes of the municipality, and any other senior officials designated by the accounting officer. Due to this strict requirement and scarce availability of suitably qualified staff to fill these positions, Municipalities are inclined to spend a large proportion of their budgets on salaries and incentives towards retaining staff in these positions. The result is less budget or priority afforded to fulfilling the requirements of operational positions such as process controllers described above. The penalties for not filling the accounting officer position (for example) may include financial mismanagement which carries a more severe punishment both legally and politically than not filling an essential technical post.

Consideration should be given to a limit or ceiling being placed on salaries and incentives for these identified positions.

4.3.6.14 Supply exceeding Design capacity at WWTWs

During and after storm events, stormwater drains regularly overflow into the sewer networks, thereby increasing the inflow to the WWTWs, and exceeding the design capacity. The result is that untreated effluent can end up being discharged directly into the receiving water resources.

4.3.6.15 Invalid / expired Licences

One of the many problems identified with WWTWs contributing to poor water quality, is in the non-compliance with licences or permits, or that the permits have expired. **Table 4.3.10** to

Table 4.3.15 indicate the design and operating capacity of WWTWs within the District Municipalities, as well as comments on the status of their licences, as sourced from the report "First Order Assessment of Municipal Wastewater Treatment Works in the Western Cape Province" DWA, June 2009 (Draft). The water quality standards not being met by the various WWTWs are identified in the WMA specific chapters later in this report.

Table 4.3.10 City of Cape Town's WWTWs Compliance

Works Name	Design Capacity	Operating Capacity	License Information
Athlone	105 MI/day	150 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 933B. A license application was submitted in January 2005.
Belville	54.6 MI/day	58.0 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 476B. A license application was submitted in February 2005.
Borchards	33.0 MI/day	32.1 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 1457B. A license application was submitted in May 2005.
Cape Flats	200.0 MI/day	200.0 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 1504B. A license application was submitted in March 2006.
Campsbay	5.5 MI/day	2.3 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 1527B. A license application was submitted in May 2005, with continuation of exemptions where the effluent quality requirements have been waived.
Dover (Groot Springfontein)	0.10 MI/day	0.005 MI/day	The works is not licensed and would most probably qualify for the granting of a General Authorisation (GA)
Dwarskersbos			The works operates under a General Authorisation (GA).
Gordonsbay	3.1 MI/day	3.7 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 2097B. A license application was submitted in May 2005, with a request for relaxation of E Coli of 1000/100ml.
Greenpoint	40.0 MI/day	25.9 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 1474B. A license application was submitted in January 2007, with continuation of exemptions where the effluent quality requirements have been waived.
Houtbay	9.6 MI/day	5.8 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 2070B. A license application was submitted in June 2005, in which a continuation of the permits' relaxation was requested with regard to SS, COD, Ammonia, Nitrates and Phosphates.
Klipheuwel	0.07 MI/day	n/a	The works is not licensed and is most probably operating under the exemption that was granted in October 1999.
Kraaifontein	17.5 MI/day	30.0 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 459B. A license application was submitted in January 2008, with a request for relaxation in relation to E Coli to 1000/100ml.
Llandudno	0.3 MI/day	0.2 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 494B.

Works Name	Design Capacity	Operating Capacity	License Information
Macassar	54.0 MI/day	36.0 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 904B. A license application was submitted in July 2005, with a request for relaxation of the E Coli standard to 1000 / 100 ml.
Melkbosstrand	5.4 MI/day	3.2 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 2026B. A license application was submitted in January 2007, with a request for relaxation of the E Coli standard to 1000 / 100 ml.
Millers Point	0.06 MI/day	0.06 MI/day	The works is not licensed and could possibly qualify for a GA.
Mitchell's Plain	45.0 MI/day	31.7 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 934B. A license application was submitted in March 2006, with the request for relaxation of COD, SS and E Coli.
Oudekraal	0.03 MI/day	n/a	The works is not licensed and is operating under its old permit, the permit no. being 1682B.
Parow	1.2 MI/day	0.9 MI/day	The works would not appear to be licensed and is most probably operating under its old permit, the permit no. being 456B, which provided conditional exemption.
Philadelphia	0.086 MI/day	0.050 MI/day	The works is not licensed and may be operating under its old permit, the permit no. being 1691B.
Potsdam Milnerton (Potsdam)	47 MI/day	36.0 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 2076B.
Scottsdene	7.5 MI/day	9.9 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 1616B. A license application was submitted in July 2005.
Simonsdam	5.0 MI/day	2.8 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 372B. A license application was submitted in August 2008, with the request for relaxation of E Coli.
West Fleur-Wesfleur (Atlantis)	8.0 MI/day	5.8 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 777B. A license application was submitted in September 2005, in which relaxation was requested with regard to E Coli (1000/100ml),
Wildevoevllei	14.0 MI/day	10.5 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 754B. A license application was submitted in November 2005, in which relaxation was requested with regard to E Coli (1000/100ml)
Zandvleit	59.0 MI/day	56.0 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 1507B. A license application was submitted in January 2007, in which relaxation was requested with regard to E Coli (1000/100ml)

Table 4.3.11 Eden District's WWTWs Compliance

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
Bitou	Plettenberg Bay	9.0 MI/day	5.0 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 1583B
	Nature's Valley	n/a	n/a	n/a
	Kurland	1.0 MI/day	0.4 MI/day	The works is not licensed
	Wittedrift	n/a	n/a	n/a
George	George & Pacaltsdorp	15.0 MI/day	11.0 MI/day	The works is not licensed
	Gwaing	12.0 MI/day	8.0 MI/day	The works is not licensed and operates under its old permit, the permit no. being 1595B
	Victoria Bay	n/a	n/a	n/a
	Heroldsbaai	0.5 MI/day	n/a	The works is not licenced.
	Kleinkranz	0.5 MI/day	0.27 MI/day	The works is not licensed and is most probably operating under its old permit, the permit no. being 1733B
	Wilderness	n/a	n/a	n/a
Hessequa	Albertinia	0.7 MI/day	0.45 MI/day	The works is not licensed
	Melkhoufontein	n/a	n/a	The works is not licensed
	Gouritzmond	n/a	n/a	The works is not licensed
	Jongensfontein	n/a	n/a	The works is not licenced.
	Slangrivier	n/a	n/a	The works is not licensed.
	Witsand	n/a	n/a	The works is not licensed
	Heidelberg	2.0MI/day	0.48 MI/day,	The works is not licensed
	Riversdale	3.5 MI/day,	0.546 MI/day	The works is not licensed
Stilbaai	3.7 MI/day	n/a	The works is not licensed	
Kannaland	Calitzdorp	n/a	n/a	The works is not licensed
	Zoar	2.06 MI/day	0.7 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 1728B
	Vanwyksdorp	n/a	n/a	n/a
	Ladismith	1.5 MI/day	2.2 MI/day	The works is not licensed and is most probably operating under its old permit, the permit no. being 1564B
Knysna	Knysna	6.75 MI/day	5.0 MI/day	The works is not licensed and is most probably operating under its old permit, the permit no. being 830B
	Belvidere	0.6 MI/day	0.297 MI/day	The works is not licensed and operates under its old permit , the permit no. being 1355B
	Buffelsbay	n/a	n/a	n/a
	Karatara	0.17 MI/day	0.10 MI/day	The works is not licensed
	Homtini / Rheenendal	0.7 MI/day,	0.14 MI/day	The works is not licensed
	Rheenendal (Petro)	0.7 MI/day	0.56 MI/day	The works is not licensed
	Brenton-on-Sea	0.3 MI/day	0.17 MI/day	The works is not licensed and operates under its old permit, the permit no. being 1778B

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
	Sedgefield	0.75 MI/day	0.75 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 1743B
Mossel Bay	Groot Brakrivier & Glentana	1.25 MI/day	0.5 MI/day	The works is not licensed and is most probably operating under its old permit, the permit no. being 1841B
	Klein Brakrivier & Rheeboek	n/a	n/a	n/a
	Vleesbay & Boggomsbaai	n/a	n/a	n/a
	Friemersheim	n/a	n/a	The works is not licensed
	Herbertsdale	n/a	n/a	The works would not appear to be licensed
	Pinnacle Point	3.7 MI/day	0.83 MI/day	The works is not licensed and is most probably operating under its old permit, the permit no. being 1505B
	Brandwagcht	n/a	n/a	The works would not appear to be licensed
	Mossel Bay, Hartenbos & Danabay	18.0 MI/day	8.0 MI/day	The works would not appear to be licensed and is most probably operating under its old permit, the permit no. being 2050B.
	De Rust	n/a	n/a	The works would not appear to be licensed
	Oudtshoorn	7.0 MI/day,	6.0 MI/day	The works would not appear to be licenced, but may still be operating under its old permit, the permit no. being 551B.
	Dysseldorp	2.0 MI/day	1.37 MI/day	The works would not appear to be licensed
WCDMA04	Uniondale	0.009 MI/day	0.009 MI/day	The works is not licensed and operates under its old permit, the permit no. being 900B.

Table 4.3.12 Central Karoo District's WWTWs Compliance

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
Laingsburg	Laingsburg	n/a	n/a	n/a
	Matjiesfontein	n/a	n/a	n/a
Prince Albert	Leeu Gamka	0.14 MI/day	0.22 MI/day	The works is not licensed, but is operating under a GA.
	Prince Albert Weg	n/a	n/a	n/a
	Klaarstroom	0.042 MI/day	n/a	The works is not licensed.
	Prince Albert	0.62 MI/day	0.58 MI/day	The works is not licensed, but is operating under a GA, exemption no. 1697B, which expired 31 December 2001.
Beaufort West	Beaufort West	4.6 MI/day	2.66 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 1337B.
	Merweville	0.043 MI/day	n/a	The works is not licensed and is operating under its old permit, the permit no. being 1787B
	Nelspoort	0.1 MI/day	0.089 MI/day	The works is not licensed

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
	Murraysburg (CKDM)	n/a	n/a	n/a

Table 4.3.13 West Coast District's WWTWs Compliance

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
Bergrivier	Piketberg	1.29 MI/day	1.25 MI/day	The works would not appear to be licensed and is possibly operating under its old permit, the permit no. being 1418B.
	Aurora	n/a	n/a	The works would not appear to be licensed
	Eendekuil	n/a	n/a	The works would not appear to be licensed
	Redelinghuys	n/a	n/a	n/a
	Porterville	0.83 MI/day	0.45 MI/day	The works would not appear to be licensed and is possibly operating under its old permit, the permit no. being 1677B.
	Dwarskersbos	n/a	n/a	n/a
	Velddrif	0.971 MI/day	0.354 MI/day	The works would not appear to be licensed and is possibly operating under its old permit, the permit no. being 1592B.
Cederberg	Citrusdal	3.0 MI/day	2.5 MI/day	The works is not licensed, being applied for.
	Clanwilliam	3.0 MI/day	2.1 MI/day	The works is not yet licensed and is most probably operating under its old permit, the permit no. being 1267B. It is commented that they have commenced with their licence application process.
	Elandsbaai	0.25 MI/day	0.212 MI/day	The works is not licensed.
	Elandskloof	n/a	n/a	n/a
	Graafwater	0.25 MI/day	n/a	The works is not licensed.
	Wuppertal	n/a	n/a	The works is not licensed.
	Leipoldville	n/a	n/a	n/a
	Lambert's Bay	0.59 MI/day	0.59 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 1788B
Matzikama	Doringbaai	0.486 MI/day	n/a	The works would not appear to be licensed and may be operating under its old permit, the permit no. being 1407B
	Strandfontein	0.07 MI/day	n/a	The works would not appear to be licensed and may be operating under its old permit, the permit no. being 1407B
	Papendorp	n/a	n/a	n/a
	Klawer	0.50 MI/day	0.593 MI/day	The works would not appear to be licensed and may be operating under its old permit, the permit no. being 921B
	Lutzville	0.212 MI/day	0.184 MI/day	The works would not appear to be licensed and may be operating under its old permit, the permit no. being 1615B.

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
	Lutzville West	n/a	n/a	The works would not appear to be licensed and may be operating under its old permit, the permit no. being 1615B.
	Koekenaap	n/a	n/a	The works is not licensed.
	Ebenhaezer	n/a	n/a	The works is not licensed.
	Vredendal South	1.151 MI/day	1.0 MI/day	The works would not appear to be licensed and may be operating under its old permit, the permit no. being 1832B.
	Vredendal North	0.500 MI/day	0.320 MI/day	The works would not appear to be licensed and may be operating under its old permit, the permit no. being 349B.
	Van Rhynsdorp	0.451 MI/day	0.392 MI/day	The works would not appear to be licensed and may be operating under its old permit, the permit no. being 1685B, which expired on 31 August 2001.
Saldanha Bay	Langebaan	1.4 MI/day	1.073 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 1477B.
	Shelly Point (Sandy Point)	0.905 MI/day	0.088 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 1831B.
	Langebaan Weg	n/a	n/a	n/a
	Jacobsbay	n/a	n/a	n/a
	St Helena Bay	1.26 MI/day	0.711 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 349B.
	Hopefield	1.26 MI/day	0.711 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 349B.
	Paternoster	0.50 MI/day	0.10 MI/day	The works would not appear to be licensed.
	Saldanha	5.0 MI/day	1.934 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 1035B.
	Vredenburg	5.0 MI/day	2.495 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 1548B.
Swartland	Darling	1.5 MI/day	0.7 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 953B.
	Yzerfontein	n/a	n/a	n/a
	Koringberg	n/a	n/a	The works would not appear to be licensed
	Riebeeck Kasteel	n/a	n/a	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 1556B.

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
	Malmesbury & Abbotsdale	5.5 MI/day	4.0 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 1509B.
	Moorreesburg	1.5 MI/day	0.74 MI/day	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 206B.
	Chatsworth & Riverlands	n/a	n/a	The works would not appear to be licensed
	Kalbaskraal	n/a	n/a	The works would not appear to be licensed
	Riebeeck-West & PPC Village	n/a	n/a	The works would not appear to be licensed and is may be operating under its old permit, the permit no. being 1556B.
West Coast District Management Area	Nuwerus (WCDM)	n/a	n/a	n/a
	Molsvlei, Stoffkraal and Rietpoort (WCDM)	n/a	n/a	n/a
	Kliprand (WCDM)	n/a	n/a	n/a
		n/a	n/a	n/a
	Bitterfontein (WCDM)	n/a	n/a	n/a
		n/a	n/a	n/a

Table 4.3.14 Overberg District's WWTWs Compliance

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
Cape Agulhas	Bredasdorp	n/a	n/a	n/a
	L'Agulhas	n/a	n/a	n/a
		2.5 MI/day	1.4 MI/day	The works would not appear to be licensed, but may be operating under an old permit. Details of it the permit was however not available.
	Protem	n/a	n/a	n/a
	Klipdale	n/a	n/a	n/a
	Suiderstrand	n/a	n/a	n/a
	Elim	n/a	n/a	n/a
	Napier	0.38 MI/Day	n/a	The works is not licensed and would appear to be operating under its old permit, the permit no. being 2006B, dated 19 Jan 2000
	Struisbaai	n/a	n/a	The works is not licensed and due to its size could qualify to be operating under a GA
	Waenhuiskrans & Arniston	0.01 MI/Day	n/a	The works is not licensed and due to its size could qualify to be operating under a GA
Swellendam	Barrydale	0.164 MI/Day	0.229 MI/day	The works is legal in terms of the (previous) permit no. being 1687B, issued on 21 Oct 2001.
	Buffeljags River	n/a	n/a	n/a

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
	Malgas	n/a	n/a	n/a
	Cape Infanta	n/a	n/a	n/a
	Suurbraak	0.262 MI/Day	0.226 MI/day	This works is not licenced and is operating under its old permit, the permit no. being 165B, issued on 3 Nov 1995
	Swellendam	n/a	n/a	n/a
Overstrand	Gansbaai	0.3 MI/day	0.7 MI/day	The work would not appear to be licensed and is operating under the following permit no. 1742B, issued on 27th September 1997
	Pearly Beach	n/a	n/a	n/a
	Baardskeerders bos	n/a	n/a	n/a
	Wolvengat (Viljoenshoop)	n/a	n/a	n/a
	Hermanus	13 MI/Day	is 5.5 MI/day	The works would not appear to be licensed but is operating under permit no. 1894B, issued 29 March 2000
	Hawston	1.6 MI/Day	0.35 MI/day	The works is not licensed and has the potential of operating under a General Authority.
	Suurbraak	0.262 MI/Day	0.226 MI/day	This works is not licenced and is operating under its old permit, the permit no. being 165B, issued on 3 Nov 1995
	Koorland	0.99 MI/Day	n/a	The works would not appear to be licensed and is operating under a GA.
	Barrydale	0.164 MI/Day	0.229 MI/day	The works is legal in terms of the (previous) permit no. being 1687B, issued on 21 Oct 2001.
	Klipperivier	0.35 MI/Day	n/a	The works is in the process of applying for a licensed.
	Kleinmond	2 MI/Day	1 MI/day	The works is not licenced and is operating under its old permit no. 853B, issued on 6 Feb 1980
	Bettysbay	n/a	n/a	n/a
	Rooi Els	n/a	n/a	n/a
	Pringle Bay	n/a	n/a	n/a
	Hangklip	n/a	n/a	n/a
Theewaterskloof	Buffelsjagbaai	0.168 MI/Day	0.074 MI/day	The works is not licensed and may be operating under its old permit, the permit no. being 1845B, issued on 18 May 1999
	Stanford	0.5 MI/Day	0.3 MI/day	The works is not licensed and due to its size may qualify to operate under a GA
	Botrivier	0.6 MI/day	n/a	The works is not licensed and due to its size is operating under a GA
	Tesselaarsdal incl. Bethoeskloof, Steyntjieskloof and Solitare	n/a	n/a	n/a
	Caledon	4.2 MI/day	3.5 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 2051B, issued on 29 March 2000. Application for a license in terms of the new Act need to commence as a priority.

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
	Genadendal incl. Voorstekraal & Bereaville	1 MI/day	2.031 MI/day	The works is not licensed and due to its size could potentially qualify to operate under a GA
	Grabouw	3.6 MI/day	3.4 MI/day	The works is legally operating under permit no. 532B, issued on 8 Oct 1985. A new license application process need to commence as soon as possible
	Greyton incl. Boschmanskloof	0.3 MI/Day	n/a	The works would not appear to be licensed and due to its size is operating under a GA
	Riviersonderend	0.6 MI/Day	n/a	The works would not appear to be licensed and due to its size is operating under a GA
	Villiersdorp	1.8 MI/day	2.54 MI/day	The works is not licensed and would appear to be operating under its old permit, the permit no. being 1112B, issued on 27 Aug 1984. A license application needs to be submitted in terms of the new Act as a matter of priority.

Table 4.3.15 Cape Winelands District's WWTWs Compliance

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
Langeberg (Breede River /Winelands)LM	Ashton	3.2 MI/Day	2.15 MI/day	The works is not Licensed and is still operating under its old permit, the permit no. being 1056B, dated 14 June 1983
	Bonnievale	1.5 MI/Day	1 MI/day,	The works is not licensed and is still operating under its old permit, the permit no. being 1686B, dated 24 Oct 1996.
	McGregor	0.4 MI/Day	0.24 MI/day	The works would not appear to be licensed.
	Montagu	1.6 MI/Day	1.6 MI/day	The works is not licensed and is still operating under its old permit, the permit no. being 1252B, dated 21 Oct 1986
	Robertson	3.1 MI/Day	2.8 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 1083B, dated 14 Aug 1983
Breede Valley	De Doorns & Orchard	2.3 MI/Day	0.9 MI/day	The works is still operating under its old General Authority, the permit no. being 807B and dated 4 Aug 1979
	Sandhills	n/a	n/a	n/a
	Rawsonville	0.24 MI/Day	0.2 MI/day	The works is operating under a GA.
	Touwsrivier	0.84 MI/Day	0.59 MI/day	The works would not appear to be licensed and due to its size may be operating under a GA
	Worcester	28 MI/Day	19.2 MI/day	The works is not licensed as yet and is still operating under the old permit, the permit no. being 1571B, dated 12 Jan 1993
Drakenstein	Paarl	27.0 MI/day	22.0 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 1222B.

Local Municipality	Works Name	Design Capacity	Operating Capacity	License Information
	Kliprug	1.0 MI/day	0.2 MI/day	The works operates under a General Authorisation
	Saron	1.0 MI/day	0.8 MI/day	The works is not licensed and is operating under a General Authorisation
	Hermon	0.3 MI/day	0.1 MI/day	The works operates under a General Authorisation
	Gouda	0.4 MI/day	0.4 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 1331B
	Bainskloof village	n/a	n/a	n/a
	Simondium	n/a	n/a	n/a
	Wellington	6.0 MI/day	5.5 MI/day	The works is not licensed and operates under its old permit, the permit no. being 918B
Witzenberg	Ceres + Bella Vista	8.5 MI/day	5.5 MI/day	The works is licensed and the permit no. being 213B, dated 23 April 1987
	Op Die Berg	1.44 MI/day	n/a	Licence is pending
	Prince Alfred Hamlet	n/a	n/a	n/a
	Tulbagh	2.46 MI/Day	1.45 MI/day	An application for a licensed was submitted in 2006
	Wolseley	1.8 MI/day	1.3 MI/day	The works is operating under a General Authorisation with the GA no. being 1030B, dated 3 May 1983
Stellenbosch	Franschhoek	2.5 MI/day	1.4 MI/day	The works is not licensed and is operating under its old permit, the permit no. being 794B
	La Motte	0.4 MI/day	0.11 MI/day	An application for licensing / special authorisation has been submitted to DWA.
	Klapmuts	2.5 MI/day	0.6 MI/day	An application for licensing / General Authorisation has been submitted to DWA
	Pniel, Kylemore & Groot-Drakenstein	2.5 MI/day	1.0MI/day	An application for licensing / General Authorisation has been submitted to DWA
	Jamestown	n/a	n/a	n/a
	Raithby	0.17 MI/day	0.66 MI/day	An application for licensing / General Authorisation has been submitted to DWA.
	Stellenbosch	20.4 MI/day	17.5 MI/day	The works is not licensed and is operating under its old permit, the permit no being 2077B
	Wemmershoek	0.63 MI/day	0.11 MI/day	The works is not licensed and a licence application for Special Authorisation has been submitted to DWA.

DWA requires a 95 percentile compliance to the conditions stipulated in the Authorisation (License, permit or general authorisation). If these criteria are strictly enforced, then based on the findings of the 2009 assessment, only 4% of the surveyed plants were adequately operated and maintained.

Several of the plants have submitted licence applications to DWA several years previously but are still waiting their licence reviews. The under capacity within the DWA offices has contributed towards a back-log in the review of applications. DWA recognizes this and has placed a high priority on attending to back-log in license applications.

4.3.6.16 Municipal-Water Affairs Meeting

A meeting between the Municipalities and the Department of Water Affairs occurs bi-annually, where compliance against the Blue Drop and Green Drop reports is discussed.

4.4 ENVIRONMENTAL MANAGEMENT

The leading statute for environmental management is the National Environmental Management Act, Act 107 of 1998 (NEMA). This mandates the Department of Environmental Affairs (DEA), which is both a National and Provincial competence. The NEMA, while it has its own regulations and authorising requirements, also acts as an umbrella Act to other strategic environmental management Acts (SEMAs) such as the Biodiversity Act, the Protected Areas Act, Integrated Coastal Management Act, Waste Act, and the NWA.

In order to implement these SEMAs, there are “subsidiary” institutions to the DEA, such as Cape Nature, Coast and Marine Management and the South African National Biodiversity Institute. While water related activities are mainly addressed by the DWA. Within NEMA there are some applicable listed activities, such as excavating within a wetland. These activities are addressed by the Provincial Department of Environmental Affairs.

4.4.1 Role-Players

4.4.1.1 Department of Environmental Affairs

The Department of Environmental Affairs is a National and Provincial competence. The National Office develops policy for the sustainable management of the environment within South Africa. In terms of the NEMA listed activities, there are some activities that are only authorised by the National office, such as where parastatals are involved, linear developments spanning provinces, activities with high hazard substances, and other activities that may have an impact on a national scale. Other listed activities are authorised by the Provincial Department, i.e. DEADP. The mission of DEADP is *to promote environmental integrity that supports human well-being and economic efficiency towards sustainable life in the Western Cape.*

Key operational areas of DEADP include:

- Climate change.
- Waste management.
- Pollution management.
- Biodiversity management.
- Environmental impact assessments/development applications EIA.
- Geographical Information Systems (GIS).
- Environmental education.
- Law enforcement (Green Scorpions).
- Coastal management.

The strategic objectives of the DEADP include:

1. Embed sustainability in the Western Cape that allows it to grow and develop in such a way that it mitigates and allows for adaptation to climate change.
2. Provide leadership and innovation in environmental management and development planning.
3. Enhance the lives of all people through facilitating sustainable living.
4. Contribute to economic growth as well as participation in, and access to, the environmental economy.

The Western Cape Provincial Government identified ten strategic objectives for the next five years. Of these ten objectives, DEADP leads the strategic objective “Mainstreaming Sustainable Development

and Optimising Resource-use Efficiency” within which six key policy priorities were identified to ensure that the purpose of the strategic objective is realized. These six policy priorities are:

1. *Climate Change Management*
To reduce greenhouse gas emissions and improve air quality management. This includes measures to promote energy efficiency, renewable energy efficiency, renewable energy production and to reduce the burning of fossil fuels.
2. *Water Management*
To improve agricultural, industrial, commercial and household water use and efficiency, planning and management.
3. *Pollution and Waste Management*
To improve pollution and waste planning and management, environmental affairs and development planning
4. *Biodiversity Management*
To improve biodiversity planning, management and conservation.
5. *Land-Use Management and Agriculture*
To ensure the optimal and wise management and use of land, including the utilization of land and natural resources for productive purposes, taking into consideration conservation imperatives and preventing the fragmentation of land, and to optimize the use of these resources (for example in agricultural production and to develop new and alternative crops, improved and new production practices and methodologies to support an increase in agricultural production through the optimal and sustainable utilisation of resources against the backdrop of food security in agricultural production)
6. *Built Environment*
Mainstreaming resource-use efficiency and sustainability into land-use management and development, as well as into rural and built environment planning and management.

4.4.1.1.1 Environmental Impact Assessment (EIA)

In June 2010, the National Minister for Water and Environmental Affairs, promulgated the new Environmental Impact Assessment (EIA) Regulations 2010 in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). Since this promulgation, further amendments have been incorporated in consideration of recently published Correction Notices (July & December 2010 respectively).

These regulations came into effect on 02 August 2010 (Government Notice No. R. 660, R. 661, R. 662, R. 663, R. 664 and R. 665 in Government Gazette No. 33411 of 02 August 2010). The EIA regulations 2010 replace the EIA regulations that were promulgated in 2006 and also introduce new provisions regarding environmental impact assessments, listed activities requiring authorisations, as well as regulations regarding environmental management frameworks ("EMF's").

The EIA unit of DEADP is responsible for reviewing EIA applications and making recommendations towards the authorisations of the applications. A series of conditions are included, where applications are authorised.

The following are examples of conditions included in applicable housing and office development authorisations:

Conditions for Resource efficiency measures

- *All toilets must have an interruptible flush mechanisms that allows for complete control over flushing by the user unless the cistern is supplied with a fitted weight (to interrupt the flow) or a hippo pack or any water replacement pack/device to reduce the amount of water lost in a single flush.*
- *All toilet cisterns must have a capacity of less than 9 litres.*
- *No automatic flush urinals are to be installed in any facilities of any type whatsoever.*
- *All taps used must include an aerator that reduces the flow of water by at least 30% or to 6 litres/minute, unless used solely to fill receptacles such as basins or water/drinking troughs.*

- *Shower heads must be adjustable to reduce the water flow or have a built-in water restrictor/aerator that reduces the water flow to at least 10 litres/minute.*
- *Energy saving light bulbs such as CFLs and LEDs must be installed instead of incandescent bulbs except where the quality of the light is not sufficient for high precision work and reading.*
- *CFLs must be disposed of responsibly and not in the general waste stream to avoid mercury contamination.*
- *Where applicable, all outdoor lighting must be fitted with timers, automatic shut-off devices or photo-sensitive mechanisms to switch off the lights during daylight hours.*
- *Where applicable, rain water harvesting from the roofs must be considered.*
- *The installation of solar water heaters and solar photovoltaic panels must be considered for the generation of some of the electricity.*

The Authorising process for EIAs is a good area to make conditions for resource efficiency. However, these conditions only reach developments requiring EIA authorisation and do not provide for retrofitting of existing developments. Further, as indicated in the Legislative Review chapter, discord may occur between adjacent properties and conditional requirements of authorisation. A recommendation is to ensure these resource efficiency conditions are incorporated into the building standards practices, such that all new buildings, renovations and refurbishments are “captured”. Further, the building inspectors, when inspecting against the building standards, can monitor compliance with these conditions.

Environmental Liaison Meeting

The Environmental Liaison Meeting only occurs in the George area. It is a meeting between the Departments of Water Affairs and Environmental Affairs and Development Planning, regarding concurrent EIA applications and Water Use Licences for authorisation.

4.4.1.1.2 Pollution Prevention

Our natural environment is vulnerable to pollutants. Our rivers and land are polluted through the use and irresponsible disposal of chemicals that are harmful to the environment and in turn, to us as human beings. The burning of fossil fuels is adding various pollutants to the air we breathe. Even though we cannot always see these pollutants, they can be harmful to our health and that of our natural environment. The National Environmental Management Act provides the guidelines for DEADP to manage pollution and the effects that pollution have on the environment. The Directorate: Pollution Management of DEADP is responsible for the facilitation, development and implementation of pollution prevention policy and programmes.

4.4.1.1.3 Waste management

The Directorate: Waste Management of DEADP is responsible for the facilitation, development and implementation of waste management policies, plans, regulatory measures and systems which support integrated waste management services in terms of the National Environmental Management: Waste Act (Act No. 59 of 2008)(NEM:WA) and provincial waste management legislation.

The Directorate provides strategic leadership and support to municipalities and has engaged with various sectors of society through the implementation of project-directed measures and initiatives to improve waste management in the province, effecting our statutory mandate and constitutional obligations.

The Waste Management team's key responsibilities are to:

- Develop and implement waste management legislation, policies, norms, standards and guidelines and ensure compliance with relevant environmental legislation.
- Provide support to communities, municipalities, industry and the private sector through the implementation of project-directed measures and initiatives to improve integrated waste management in the province.

- Facilitate the regulatory process concerning the licensing and compliance monitoring of waste management facilities.
- Manage waste-related complaints received from the public through municipal management.

This unit has been responsible for compiling the Provincial Waste Management Plan. The conflict between Industry Plans and Water Services Development Plans (which includes addressing industrial effluent) has already been commented on in the Legislative Review chapter.

Waste Forum

Water related issues need to be addressed at the Waste Management Forum, including aspects relating to waste water from leachate treatment plants or general leachate. The Forum should have water related aspects as a standing item on agenda.

4.4.1.1.4 Regulation and Enforcement

DEADP is responsible for the compliance monitoring and enforcement of the NEMA and its SEMAs within the province. These tasks are carried out by Environmental Management Inspectors, which have designated power of enforcement to regulate a specific or group of NEMA Acts. With regards to NWA activities, the unit cooperates extensively with the DWA enforcement officials.

Crime Forum

The Crime Forum is attended by the Department of Environmental Affairs, South African Police Service, Cape Nature and Department of Water Affairs (when necessary). The forum provides engagement between the regulatory and enforcement sections of the various departments and the SAPS to discuss investigations of environmental crimes and cases.

4.4.1.1.5 Working for water



South Africa established its Working for Water Programme in 1995 under the leadership of Professor Kader Asmal, then Minister of Water Affairs and Forestry. The Programme has multiple objectives of reducing the impact of invasive alien plants on South Africa's water supplies, improving productive potential of land, and restoring biodiversity and ecosystems function as well as creating jobs and economic empowerment. To date, the Programme has cleared 1.96 million hectares of invasive alien plants and creates some 30,000 employment opportunities per annum.

While the objectives of the project are valid, the methodology used in removing the alien invasive plants has been questioned, and has led to some concern by property owners.

4.4.1.2 South African National Biodiversity Institute

The South African National Biodiversity Institute (SANBI) was established by the National Environmental Management: Biodiversity Act 10 of 2004. According to this Act, SANBI has many functions, including reporting to the minister about the status of:

- The country's biodiversity
- Protected species
- Invasive species

In addition, the institute must also protect and conserve plants in national botanical gardens. The institute is governed by a board and in most cases; the board is the decision maker. According to the Act, the board must consist of not more than 9 members, but not less than 7, a director general as well as a CEO. A member of the board must have qualifications and experience in the biodiversity field and

he/she may not be a member of parliament or other municipal councils. The board members are generally appointed for a term of 3 years.

The institute obtains its funds from various sources including, money from parliament, donations, grants from organs of states, borrowed money and other sources which are covered by section 31 of the Act.

4.4.1.2.1 Wetland Forum

This forum is organised by SANBI with representation from Cape Nature, the Department of Water Affairs, Environmental Affairs and Agriculture, together with members of the public and other parastatals. The forum raises awareness for wetlands, and provides opportunity to raise concerns relating to activities in wetlands, for example.

4.4.1.2.2 Working for wetlands

Wetlands play a vital role in human health and well-being yet out of more than 114 000 wetlands that have been mapped all over the country, many are either damaged or destroyed due to human impact.

In 2000 the Working for Wetlands Programme was launched due to a need to rehabilitate these wetlands spread throughout the country. To date there are about 40 wetlands rehabilitation projects all over South Africa. This has not only seen thousands of people receiving employment but has also made a positive impact in skills development.

The programme is implemented by the South African National Biodiversity Institute (SANBI) on behalf of the departments of Environmental Affairs (DEA); Agriculture, Forestry and Fisheries (DAFF) and Water Affairs (DWA). It forms part of the government's Expanded Public Works Programme, which seeks to draw unemployed people into the productive sector of the economy.

4.4.1.3 Marine and Coastal Management

Marine and Coastal Management (MCM) are mandated under the NEM:ICM, Act of 1999. Application and implementation of the Act is carried out by MCM, an organ of state under the Department of Environmental Affairs and Development Planning (DEADP). The functions of MCM include protection and management of estuaries, and discharge of effluent into coastal waters.

4.4.1.4 Cape Nature

Cape Nature is a public institution that is statutorily responsible for the conservation of biodiversity in the Western Cape. The Western Cape Nature Conservation Board Act 15 of 1998 governs the institution, consequently mandating the institution to "promote and ensure nature conservation; render services and provide facilities for research and training; and generate income.

The central initiative of Cape Nature is to create a successful 'Conservation Economy' that all Western Cape citizens can embrace and also to transform biodiversity conservation into a key component of local economic development in the province. Cape Nature aims to achieve their objective through various programmes and projects, such as:

- Community-based natural resource management and local economic development,
- Youth development,
- Environmental crime investigation,
- Wildfire management,
- Stewardship, and
- Eco-tourism development.

To implement its mandate in the Western Cape Province, Cape Nature is reliant on partnerships and role-players to guarantee a successful conservation economy.

The Cape Nature mission is *"To locate biodiversity conservation in the mainstream of local economic development through the establishment of a conservation economy in the Western Cape."*

The Cape Nature vision is *“The establishment of a successful ‘Conservation Economy’ – embraced by all the Western Cape and to transform biodiversity conservation into a key component of local economic development in the province.”*

4.4.1.4.1 Fire Management Forums

The Western Cape is prone to veld fires, especially during the dry summer months. These forums are important for ensuring climate change preparedness with regards to increased fire hazards due to climate change, as well as addressing necessary resources for fighting fires, e.g. water storage facilities.

4.4.1.5 SANParks

The South African National Parks (SANParks) manages National protected areas across South Africa, such as Table Mountain National Park. Provincial and local protected areas are managed by Cape Nature and the Local Municipalities. SANParks and Cape Nature cooperate extensively with regards to management of protected areas. Where SANParks carries out any rehabilitative works, they are subject to the authorising processes of the relevant Departments.

4.4.1.6 Saldanha Bay Forum

The “Bay” Forum was formerly adopted on 29 March 2004.

Saldanha Bay and Langebaan Lagoon (hereafter collectively referred to as ‘the Bay’) enjoy a unique and large group of users that greatly benefit from the many opportunities that the Bay offers. However, these users also have diverse needs which in turn have diverse existing and potential impacts on the Bay environment. The combination of areas of international biophysical significance such as the Langebaan Lagoon Ramsar site, the West Coast National Park and the Langebaan Marine Protected Area with the highly industrialised Port of Saldanha and related activities requires urgent joint and strategic integrated management.

Stakeholders and users of the Bay have felt that such integrated management is beyond the mandate of the local authority, and an appeal was made in 2002 to all stakeholders in the greater Saldanha Bay area to support the establishment of a multi-stakeholder forum that could contribute towards the future strategic and integrated management of the Bay area.

More specific motivations have been given for the establishment of the Forum, namely:

- The Provincial Administration Western Cape condition of approval for construction of a temporary groyne at Langebaan required the establishment of such a body; and,
- The Saldanha Bay Water Quality Trust had identified a similar need. This was consistent with an earlier view proposed by the Department of Water Affairs and Forestry.

The Forum deals with matters relevant to the water and coastal zone area, as well as any inland area, as long as the issue is of direct consequence to the water area and coastal zone.

The overarching purpose of the Forum is to promote sustainable development for the Bay and coastal area. It seeks the promotion of an integrated approach to the management, conservation and development of the waters of Saldanha Bay and the Langebaan Lagoon, and the land areas adjacent to, and influencing it.

The Forum aims to:

- Be a vehicle that is representative of all of the key Bay stakeholder groups;
- Provide a mechanism for the exchange of information;
- Monitor the management and health of the Bay area, as well as initiate and guide research on it;
- Provide a forum for dialogue and debate on the management of the Bay; and,

- Provide advice and support to regulatory and governmental bodies with responsibilities for the management of the Bay.

The Forum is an *ad hoc* body without formal statutory authority. It is a consensus seeking body and performs an advisory function. The conclusions reached and decisions taken by the Forum will act as recommendations to the various stakeholders concerned with the Bay. A culture of consensus and accountability will be promoted to encourage participating groups to act on conclusions reached. The decisions taken will not be legally binding on the participants.

The Forum is comprised of representatives of all key sectors with a direct interest in the management of the Bay. The groups represented on the Forum include:

- Those who will influence, or be affected by, the management of the Bay;
- Those that regulate or govern aspects of the management of the Bay;
- Those who play key economic roles within the Bay, and in areas adjacent to it; and,
- Those that fill key social roles in the life of communities adjacent to the Bay

The following are the key sector categories represented on the Forum:

- **Regulatory, Governmental and Existing Advisory Bodies:** these include local government, relevant national and provincial government departments, and the South African National Parks Board;
- **Business Bodies:** these include representatives of large scale processing and manufacturing industry, the fishing and mariculture industry, the port authority and port operations, the tourism sector, as well as organised industry and commerce organisations; and,
- **Civil Society Bodies:** these include community and ratepayer organisations, trade unions, environmental NGOs and recreational groups.

4.4.1.7 Community Initiatives

4.4.1.7.1 WESSA

WESSA (the Wildlife and Environment Society of South Africa) is a national, environmental non-government organisation. WESSA focuses on the sustainable and equitable management of our natural resource base by building society's environmental sensitivity and competence. More specifically WESSA's mission is to promote public participation in caring for the Earth. This is expressed in the diverse and dynamic collaborative partnerships that WESSA creates to enable its work. With an 84 year track record WESSA is recognised for its strong membership base, professional staff, effective project management and high standards of corporate governance.

4.4.1.7.2 World Wildlife Fund - Water Neutral Scheme

The WWF Water Neutral Scheme is a partnership between civil society, through WWF South Africa, and government, through its Working for Water Programme that allows water users to quantitatively balance their water use account.

The term 'water neutrality' is defined to imply a voluntary process whereby participants seek to quantitatively balance their water use accounts by both reducing their water usage and investing in projects which increase supplies of clean fresh water. Water neutrality therefore implies balancing the demand and supply of water through a deliberate intervention by the water user.

Vision

To harness private sector commitment for the security and wise management of South Africa's scarce water resources, by reducing water demand and investing in the security of our water supplies.

Approach

Participants are encouraged to become water neutral through a three step process (known as R3) of:

- 1 **Review:** Participants are required to undertake a detailed water audit to accurately measure their operational water usage. The results of this audit, known as the company's 'water deficit', need to be publicly available to promote transparency and open dialogue.
- 2 **Reduce:** In partnership with WWF South Africa, corporations are required to develop and implement an ambitious, but realistic, time-bound water reduction and efficiency strategy.
- 3 **Replenish:** Corporations are then required to invest in projects that will make available 'new' water into freshwater ecosystems, equal to their 'water deficit' (i.e. the net outcome of Steps 1 and 2). While the study team believes that there may be numerous projects that could quantitatively deliver 'new' clean water, as a start, it has concentrated its efforts on the quantification of water made available through the removal of invasive alien plants. The large amount of data available on the topic through the current and historic experiences of the Working for Water Programme made this an obvious first choice. To facilitate the calculation of how investments need to be made for a given corporation to become Water Neutral, WWF have developed a 'Water Neutral Calculator'.

The Water Neutral Calculator

The Water Neutral Calculator determines the investments that a company needs to make to become water neutral through the removal of invasive alien plants. The calculator is based on two principal input values:

- The average amount of water 'replenished' through the clearing of a hectare of invasive alien plants and maintaining it in a rehabilitated state; and
- The average cost of clearing a hectare of invasive alien plants and maintaining it in a rehabilitated state.

The amount of hectares of invasive alien trees that a water user would need to finance to be cleared to become water neutral, is therefore calculated by dividing the water user's 'water deficit' by the average amount of water replenished through the clearing of a hectare of invasive alien trees (2 540m³/year).

Water users may choose how they wish to structure their water offsets over the first 10 years of the minimum 20-year investment period. Annual payments are then calculated using a matrix model.

Implementation

This work represents one of the first examples of a water neutral scheme that quantitatively balances a water user's account through investments in both demand and supply side management. Within the context of a chronically water stressed developing country with huge economic development pressures and social upliftment challenges, the WWF Water Neutral Scheme holds much promise in providing environmental, economic and social benefits through a voluntary market based mechanism.

The total annual amount of water used by industrial and urban users in South Africa, the main target market for this scheme, is estimated to be 3 652 million m³. This is in line with the 3 300 million m³ of water estimated to be used by invasive alien trees. Even a modest 10% market uptake of this scheme could therefore deliver significant benefits in terms of increased water yield, management of invasive alien trees, biodiversity restoration and employment creation. Some of South Africa's largest corporations, including The South African Breweries (SAB) Ltd, Woolworths and Sanlam, have already committed to the scheme.

4.5 AGRICULTURAL RESOURCES

The Department of Agriculture is mandated through the Conservation of Agricultural Resources Act, Act 43 of 1983 (CARA). The objective of the CARA is:

To provide for the conservation of the natural agricultural resources of the Republic by the maintenance of the production potential of land, by the combating and prevention of erosion and weakening or destruction of the water sources, and by the protection of the vegetation and the combating of weeds and invader plants.

In terms of Schedule 4 of the Constitution, *Agriculture* is a concurrent competence of National and Provincial Government. Similar to the NWA, the National Department of Agriculture is responsible more for national management, setting guidelines, and regulation; whereas the Provincial Department of Agriculture is geared more towards regional assistance to farmers.

The CARA makes provision for various institutional bodies for the conservation of agricultural resources. These include:

- Conservation Advisory Boards;
- Regional Conservation Committees;
- Conservation Committees; and
- Department of Agriculture (National and Provincial Offices)

As illustrated in **Figure 4.5.1.**, in the Western Cape there are several Conservation Committees in specific areas, but only one Regional Conservation Committee.

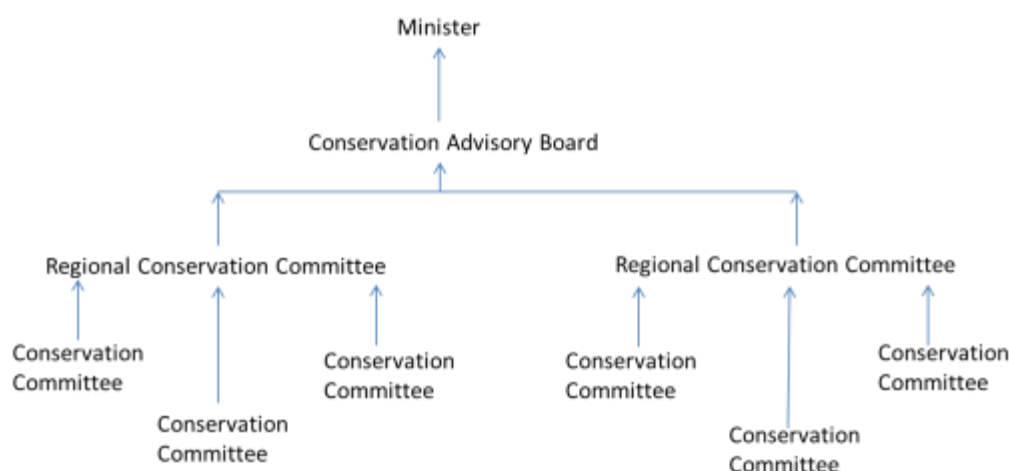


Figure 4.5.1 Levels of conservation institutions as identified by CARA.

4.5.1 Conservation Advisory Board.

In terms of Section 17 of the CARA, the objective of the Conservation Advisory Board is to advise the Minister on:

- The desirability of prescribing specific control measures with regard to particular areas;
- The desirability of establishing specified schemes and provisions thereof.

Members of the Board include: an executive officer and another officer of the Department, 1 officer of Department of Environmental Affairs, 1 person from among the members of each regional conservation committee, and 1 person nominated from SA Agricultural Union.

This should ideally include a representative from DWA, due to the significant role water plays in agricultural practices.

4.5.2 Regional Conservation Committees.

The Regional Conservation Committee advises every conservation committee in the region concerned on matters regarding the conservation of natural agricultural resources. The only active Regional Conservation Committee in the Western Cape is operational in the Eden District Municipal Area. The Committee is comprised of the Department of Agriculture, sector representatives, Cape Nature and DEA.

DWA should be represented due to the importance of water in agricultural practices.

4.5.3 Conservation Committees.

Conservation Committees are established by the Minister, in terms of Section 15 of the CARA. The Conservation Committees consist of a minimum of 5 members made up of land users of a particular area, and a representative of the farmers' union/association of the area. Soil Conservation Committees established in terms of Section 9 of the Soil Conservation Act, Act 76 of 1969, are deemed to have been established as Conservation Committees under the CARA.

Section 15 of the CARA states that:

(2) A conservation committee so established for any area-

- (a) shall promote the conservation of the natural agricultural resources in the area concerned in order to achieve the objects of this Act on or with regard to the land in that area;
- (b) shall advise the Department on any matter as to the application of the Act or a scheme in the area concerned, or which it may deem necessary in order that the objects of this Act may be achieved in the area concerned; and
- (c) may exercise such other powers and shall perform such other duties as may be conferred or imposed upon it by or in terms of this Act or by the Minister.

There are approximately 6 Conservation Committees operating within the Western Cape. These include Simonsberg, Agtergroenberg, Tulbagh WUA and Breedekloof Wyn & Toerisme.

4.5.4 Farmer's Unions and Associations

Farmers are self-organised into representative organisations, such as the Farmers Union or Association, Provincial Agricultural Union and the South African Agricultural Union. These mirror the government Departments, i.e. on local, regional and national scale. The main Agricultural Union is AgricSA, and many emerging farmers are represented by National African Farmers Union (NAFU). The links between these Farmers Unions and Conservation Committees is illustrated in **Figure 4.5.2**.

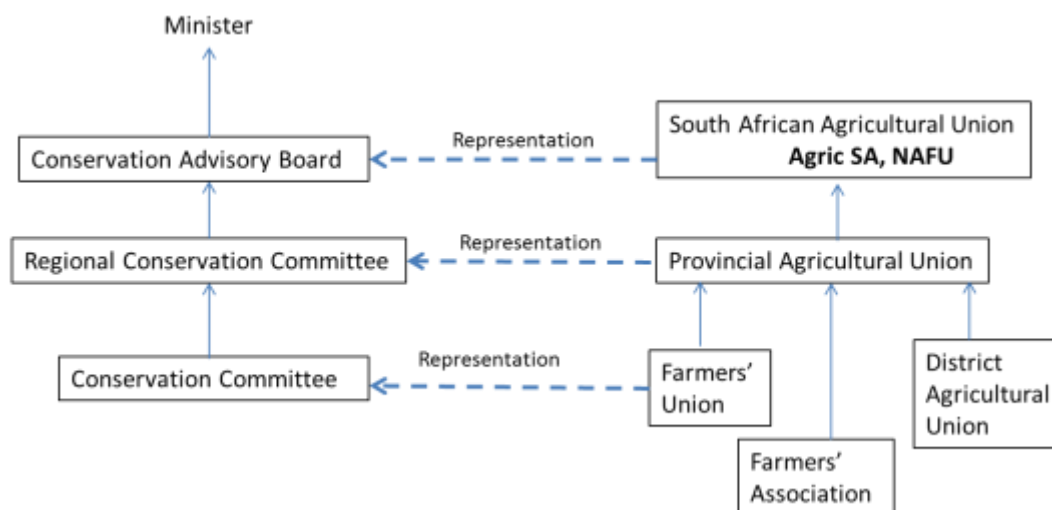


Figure 4.5.2 Farmer's Unions and Associations

The overall link between the various agricultural institutions as set out in the CARA is illustrated in **Figure 4.5.3**.

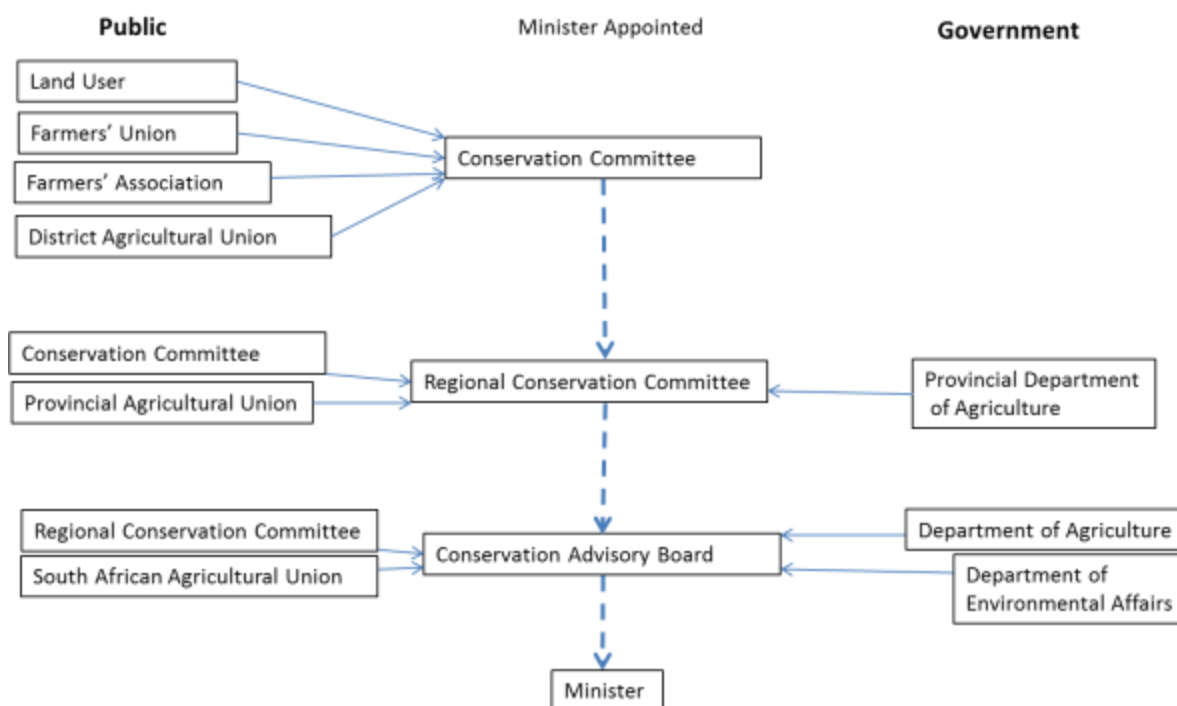


Figure 4.5.3 Interaction across all spheres of agricultural institutions as identified in the CARA.

4.5.5 Department of Agriculture (DoA)

The Department of Agriculture is the responsible institution for implementing the Conservation of Agricultural Resources Act. Competency lies between the National and Provincial offices.

The Provincial office carries out activities in 4 key areas, i.e. Land care in terms of CARA implementation, Landcare Projects, Area Wide Planning (AWP), and Disaster Management Planning.

The National office is responsible for enforcement activities, whereas the Provincial office monitors and mitigates. Compliance activities are carried out by the Provincial office and Cape Nature. Where strict enforcement is required then such cases are transferred to the National office. In terms of an enforcement strategy, the old strategy was one of leniency and mitigation of impacts rather than taking enforcement action. However, “changing of the guard” has led to a stricter shift in regulation.

The Provincial office suffered from staff turnover in the previous 3 years but they have managed to turn this around. The National Office, however, still has large vacancies.

4.5.5.1 CARA Land Management

The Provincial Department provides assistance with farm planning, survey and design of farm and infrastructure, subsurface drainage, and how to protect water resources. This unit is responsible for implementing and monitoring compliance to the CARA and attends the CCAW Forum.

4.5.5.1.1 Collaborating Committee on Agricultural Water (CCA W Forum)

The Regional Office of Water Affairs and the Provincial Department of Agriculture have regular monthly meetings, via the Collaborating Committee on Agricultural Water (CCA W). The CCA W forum provides an opportunity for the two Departments to discuss particular applications or issues arising in the agricultural sector that overlap or conflict with, or require co-ordination in relation to water affairs. The Catchment Managers of the CMAs attend the CCA W Forum.

The Department of Environmental Affairs does not usually attend these meetings.

4.5.5.2 LandCare

LandCare South Africa is a community-based programme supported by both the public and private sector through a series of partnerships. It is a process focussed on the conservation of the natural resources (soil, water and vegetation) through sustainable utilisation and the creation of a conservation ethic through education and awareness. In addition, it seeks to address rural poverty by means of sustainable job creation. The programme is targeted at farming groups (commercial and small, medium and communal farmers) associated with exploitive farming practices and limited resources for implementing corrective measures. The key objectives of LandCare South Africa are to:



- Provide a framework for individuals, community organisations and the public and private sector, through partnerships to optimise productivity and sustainability of the natural resources through management, protection and rehabilitation;
- Develop the capacity and skills of land users through education, knowledge sharing, information, participatory interaction for better access and management of resources;
- Support institutional building at all levels of governance for improved communication, networking, financial and other support services;
- Empower all people through knowledge and understanding to take the responsibility for the care of the environment;
- Ensure as far as is practicable that resources are used at a rate within their capacity for renewal;
- Maintain and enhance the ecological integrity of natural systems;
- Minimise or avoid risks that lead to irreversible damage; and
- Maintain biodiversity (contribute towards the maintenance of biodiversity).

The operational procedures of the programme are guided by the following operational principles:

- Job creation, with the focus on the 'poorest of the poor', and sensitivity to gender issues;
- Sustainability in terms of the natural resource base and, as far as possible including economic and social sustainability (through development of new or more viable land-use options, and development of entrepreneurs);
- The programme should not be a form of subsidisation for private landowners (but can be a partnership arrangement with equitable input from state and landowner, provided net economic benefit to society exceeds cost);
- Efficient and effective delivery system (this may include a national programme manager dedicated solely to managing the development and implementation of the Land Care Programme, and regional co-ordinators with specialised input from relevant agricultural experts, and will ultimately depend on capacity within Provincial Departments of Agriculture and Nongovernment Organisations); Skill and knowledge transfers, and development of SMMEs (Small, Micro- and Medium Enterprises);
- Adherence to provisions of the Labour Relations Act and all other relevant legislation;
- Education and awareness of why the programme is important and of the reason for methods being employed; and
- Monitoring, evaluation and quantification of outcomes in terms of resource conservation and/or improvement and socio-economic indicators relating to the quality of life.

Table 4.5.1 lists government's five major programmes and their links to civil society.

Table 4.5.1 List of government initiative programmes and civil society links.

Government Programmes	Links to Civil Society	Nature of Links
1. Major resource conservation works	Provincial LandCare Advisory Forum (PLCAF)	Review and advise
2. Community and staff capacity building	NGOs, Local groups, farmers associations, PLCAF	Partnerships with NGOs, etc., to undertake training and community development, advice and research
3. Awareness programme	School-based voluntary groups, environment groups, agricultural unions/co-operatives, business etc., PLCAF	Partnerships, sub-contracting, advice
4. Policy and legislation	Universities, environment groups, PLCAF	Research and advice
5. Research and monitoring	Universities, environment groups, PCLAF	Sub-contracting, advice

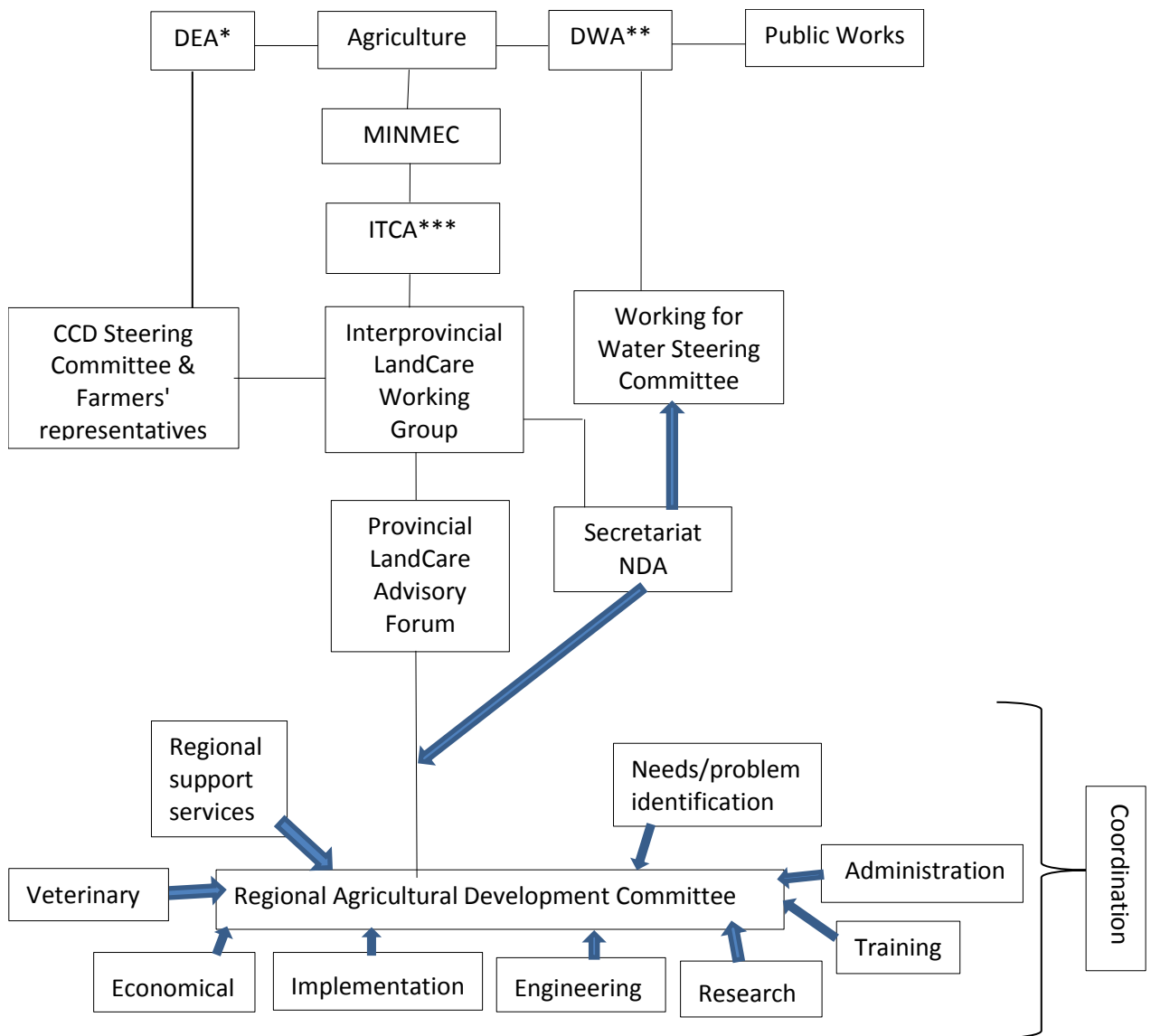
Activities within the Government Programme *Major resource conservation works* include:

- Supporting the maintenance of conservation works;
- Identifying badly eroded areas for rehabilitation;
- Curtailing of bush encroachment;
- Alien plant control;
- Flood-plain management;
- Unlocking the potential of indigenous plants;
- Reclamation/rehabilitation; and
- Integrated land-use projects.

While these activities are good initiatives, many of the activities may require authorisations in terms of NEMA, NWA, NHRA, etc.

The Provincial LandCare Advisory Forums (PLCAF) are the provincial bodies of the programme and are expected to provide a basis for LandCare South Africa in due course. The Forum is comprised of the Provincial LandCare coordinator (from DoA), representatives of NGOs, representatives of civil society, and representatives of community-based organisations. There are currently four operational LandCare Forums within the Western Cape. These are located in Laingsburg, Prince Albert, Beaufort West, and Murraysburg.

The organisational structure of the LandCare programme is designed to foster national and provincial ownership of the programme and to ensure integration of its activities into priority on-going national agricultural development programmes. The structure inter-links national and provincial departments of agriculture, NGOs and civil society, as illustrated in **Figure 4.5.4**.



* DEA (Department of Environmental Affairs)
 ** DWA (Department of Water Affairs)
 ***Represented at the statutory committee of all Director-Generals through the Committee for Environmental Coordination

Figure 4.5.4 Organisational structure of the LandCare South Africa Programme

Within the LandCare project, the community organisation chooses the geographic area for application. There are no limitations, but rather the programme focuses on outcomes. The Provincial Department, through the Directorate of Sustainable Resource Management, provides assistance with the Programme.

4.5.5.3 Areawide Planning (AwP)

Areas are not limited to municipal or catchment boundaries, rather geographically similar or adjacent areas. Essentially an area is selected and delineated into grid blocks. The grid blocks make provision for water meter/pump monitoring per block. The grid also helps target specific resources to specific areas. An example is the Upper Breede Collaborative Extension Group (UBCEG).

4.5.5.3.1 Upper Breede Collaborative Extension Group (UBCEG)

In 2006 the agricultural, conservation and planning departments agreed that it would be better to undertake a collaborative planning approach to address Sustainable Resource Conservation needs in the Breede River valley. The objective was to undertake a participative approach through “LandCare Areawide Planning” in order to identify Sustainable Resource Conservation needs and optimize agricultural planning and development.

This allowed both individual and community needs to be addressed in the context of the rural landscape while taking into consideration important features of the natural environment. These needs and spatial information then feeds back into the Integrated Development Plan (IDP) through the (Spatial Development Framework) SDF of the Local and District Municipalities.

As a result, by the end of 2006, the UBCEG was established in recognition of the need for a body to provide cooperative governance in the rural areas of the region, since existing interdepartmental forums or reference groups focused mostly on urban issues.

The UBCEG recognized the participatory approach that LandCare Areawide Planning follows and through this approach lays the foundations to:

- Coordinate & direct the local activities and projects of diverse departments who have overlapping goals;
- Spatially include resource conservation priorities through joint planning and information sharing into the SDF and IDP;
- Successfully produce joint applications for funding support.

The increased coordination between organizations has made possible the formulation of a list of priorities for action which have broad regional support. This includes Junior LandCare camps; environmental awareness days; clearing of invasive alien plants and restoration work where needed.

These priorities result in a positive impact on the environment, as natural resources and key biodiversity areas are better managed thereby buffering the ecosystem services that the agricultural economy relies on against the impending impacts of climate change. This further results in other social and economic spin offs as managing natural resources is a labour intensive task therefore creating a number of job opportunities for previously disadvantaged communities.

The membership of the UBCEG has now expanded considerably, making this a very powerful forum. The thirteen permanent members now include:

1. National Dept. of Agriculture; Forestry and Fisheries;
2. National Dept. of Water and Environmental Affairs;
3. Working for Water;
4. South African National Biodiversity Institute;
5. Provincial Dept. of Agriculture (LandCare);
6. Provincial Dept. Environment Affairs and Development Planning;
7. Cape Nature (provincial conservation agency);
8. Cape Winelands District Municipality;
9. Witzenberg Local municipality;
10. Breede Valley Local municipality
11. Breedekloof Wine and Tourism (private sector);
12. Biodiversity and Wine Initiative (NGO)
13. Custodians of Rare and Endangered Wildflowers (NGO)

One of the obstacles within the implementation and operations of the UBCEG, is the differing district and municipal boundaries.

4.5.5.4 Disaster Management

This unit within the Provincial DoA, was responsible for compiling the 2005 Drought Management Plan. The Plan has changed focus over the years, from predominantly a reactive plan in drought situations, to a more proactive approach today to accommodate drought. The Plan is commented on in the subsequent chapter on Existing Strategies and Plans.

This section also looks at structures for flood control on agricultural land.

4.5.6 Other

The Biodiversity and Wine Initiative, is an initiative by some of the winemakers of the province. The initiative aims to rehabilitate fynbos and increase biodiversity within the wine estates. Participating farmers restore 2ha of fynbos for every 1ha of cultivation. Through the BWI, water efficiency techniques and other conservation measures are promoted and implemented.

4.5.7 Operational Issues

4.5.7.1 Out-dated legislation

The CARA needs to be updated as it still refers to the four provinces according to demarcation long since superceded.

4.5.7.2 Social upliftment

The Provincial office has been involved in initiating social upliftment projects, especially within the LandCare programme, despite this not being in their mandate. However, they need to implement these projects in order to achieve their objectives. For example, if the social needs of the farm labourers are met, such as adequate provision of sanitation, then the farm workers are more likely to willingly undertake land care activities such as removing tortoises from the road, clearing alien invasive plants, etc. Once projects have been initiated, Department of Social Works takes over the project.

4.5.7.3 WWTWs and EUROCAP

EUROCAP is the international agricultural trade authority for Europe. Produce that is imported must comply with EUROCAP's strict agricultural production and procedures requirements. EUROCAP has threatened to ban imports from the lower Berg River catchment because the water quality has deteriorated significantly. The farmers have raised concern over the water quality with the Minister and the impact to the local economy. An initiative has since been implemented to upgrade the WWTWs in the upstream catchments. Regular meetings are held between the municipalities involved, DWA and Working for Water, and the Farmers' Association, to monitor the water quality situation.

4.6 FORESTRY

4.6.1 Department of Forestry

There are two key statutes that govern forestry activities in South Africa. The first, the National Forest Act (Act 84 of 1998), refers mainly to indigenous forests and their protection. The second and more relevant to the IWRM Plan is the National Water Act, (Act 36 of 1998). In terms of NWA section 21(d), forestry is identified as *a stream flow reduction activity contemplated in section 36*. Section 36 states: (1) *the following inter alia are stream flow reduction activities: (a) the use of land for afforestation which has been or is being established for commercial purposes.*

The second statute in particular gave the Department of Forestry its mandate, and previously being housed with the Department of Water Affairs (DWA), made operational issues fairly straight forward. However, in recent years, the DWA has been grouped with the Department of Environment (DWEA)

and the Department of Forestry has been grouped with the Departments of Agriculture and Fisheries (DAFF), leading to some unresolved operational issues, especially in terms of permitting of forestry activities.

In terms of commercial forestry activities in the Western Cape, the Department of Forestry leases government land for forestry activities. The main company operating in the Western Cape is Mountain to Ocean (MTO). There are two smaller companies operating in the southern Cape region as well, those of Hans Merensky and Steinhoff. A Parliamentary decision was taken and strategy (Forestry Charter) signed to focus forestry activities more in the Eastern Cape and Mpumalanga provinces of South Africa. Since this decision there has been a decline in forestry applications within the Western Cape Province (or activities are continuing illegally; or applications are for small properties ± 5 ha which are typically expensive projects to licence). Further, there are many areas due to “exit²” in the next 1-15 years. One of the problems associated with “exited” land, is that it should be rehabilitated to fynbos vegetation or indigenous forest. In many instances rehabilitation is not implemented either due to poor regulatory enforcement, or the land is identified by Local Governments for development, therefore leading to competition between fynbos conservation and urban development. Rehabilitation is optimal when undertaken within 5 years of exiting.

The development of policies and guidelines that are forest management specific are developed by the National Department of Forestry in Pretoria. Policies and guidelines relating to environmental management of forests and implications on water are developed by the National Department of Water Affairs.

4.6.2 Permitting and regulation

When the NWA of 1998 was implemented, afforestation was regarded as lawful if it was established before 1972, and/or authorised by a permit from 1972 – 1998 and that the plantation adhered to all applicable legislative requirements and permit conditions. Since the NWA, commercial forestry has been managed through s.21(d) and s.36 water licences. However, these permits are not enforced or monitored, both because it is viewed by DAFF as a DWA function (because it’s their licence) and by DWA rather as a function of Department of Forestry. Secondly, between the two Departments there is insufficient capacity available to regulate and enforce the permits and licences. Some informal monitoring by DAFF has been carried out.

Stream flow reduction activities (SFRA) are land-based activities, including forestry. The SFRA Licence Application Assessment Committee (LAAC), a ministerial appointed committee to review applications, reviews forestry activity applications on a regular basis. The committee is constituted of various section representatives from Department of Water Affairs and the Provincial Department of Forestry. The membership of the review committee comprises principal government organisations responsible for the regulation, control and management of SRFA activities. They are summarised in the **Table 4.6.1** below. However, there are significant vacancies and retirement of personnel with institutional memory have hampered the formal convening of these meetings. However, when applications are received, an attempt is made to convene a meeting with as many as possible relevant representatives. The Department of Forestry provides information and guidance on the tree-type selection and management of the activities, while the DWA looks at the impact on water availability in the proposed area.

Table 4.6.1 Members and representatives on the Stream Flow Reducing Activities Licence Application Assessment Committee (SAFRA LAAC)

Authorising Departments	Non-authorising government departments and non-governmental organisations	Other role players

² Exiting refers to a plantation area that has been under plantation, but the plantation is being cut and the area will not be re-planted for plantation, i.e. the closing down of a plantation.

DWA (Water Resources Management)	DAFF: Forestry	Forestry industry
DWA Regional Offices	DWA Working for Water	Local leadership
Catchment Management Agencies	Department of Land Affairs	The SFRA licence applicant
Provincial Departments of Environmental Affairs	District and Local Municipalities	Representative of the applicant
National/Provincial Departments of Agriculture	Provincial heritage conservation agencies	Interested and affected parties
-	Provincial authorities for conservation of biodiversity	-
-	NGOs	-

Since 1999 the Afforestation Permit Review Panel (APRP) has replaced the SFRA LAAC, but the representation is still the same. Apart from Department of Forestry, the three key authorising departments are DWA (National Chief Directorate: Water Use); the Provincial Departments of Environmental Affairs and the National/Provincial Department of Agriculture.

In terms of CARA, it is the Department of Agriculture's duty to regulate the transfer of agricultural land to forestry, including the transfer of the use of potential high quality agricultural soil to afforestation uses and the transfer of water allocated to agriculture.

SFRA Water Use Licence Application types may be divided into the following categories:

1. Licensing of forestry already recognised as an existing lawful water use
2. New afforestation on virgin or transformed land (most common)
3. Category 2 plant demarcation process
4. Yield enhancement or conversion
5. Genus exchange
6. Windbreaks
7. Water trading
8. Exchange for dryland sugarcane
9. Existing but unlawful sugarcane

4.6.3 Operational Issues

4.6.3.1 Forestry Charter

The Forestry Charter is a Government Gazette (No. 32320). The main objective of the Charter is to ensure that opportunities and benefits of the Forestry Sector are accessible to previously disadvantaged South Africans through the implementation of the Broad-based Black Economic Empowerment Act (No. 53 of 2003). It is the desire of the Forestry Sector that through the implementation of a Transformation Charter, progressive changes will address the inequalities in the sector, which in turn will encourage the development and growth of the sector. The Internal Strategic Perspectives applicable in the Western Cape, in contrast to the Forestry Charter, advise that afforested land be decommissioned and transferred to alternate land uses. Both options are however focussed on poverty eradication.

Further, the Forestry Charter does not take consideration of water availability when determining priority areas for forestry activities.

4.6.3.2 Changes in legislation

The recent 2010 NEMA amendments and new listed activities reviewing EIA authorisation, have had a significant impact on the Department of Forestry and forestry related activities. The implications of these changes, especially at an operational level, are currently still being negotiated. Therefore, in the interim, any policy documents/guidelines provided by DAFF would not account for these NEMA changes.

4.6.3.3 Separate from DWA

The SFRA authorising process is not as efficient as previously, when DWA counterparts and Forestry were within the same department. Formal procedures must now be established for the interaction of Forestry and DWA.

4.6.3.4 Out of date

Much of the information about the forestry sector includes fairly old data, i.e. older than 5 years. With the relatively recent separation of Forestry from Water Affairs, all the out-dated internal processes should be revised and updated.

4.7 MINING

Consideration should be given to the fact that the mining sector is a very small water user in this Province. As such, some of the issues raised in this Mining Section would be more appropriately taken up in the IWRM Plans of other Provinces.

During Phase 1 (Status Quo) of this IWRM study, information regarding the mining activities in the Province were not readily available. This highlights the need for cooperative governance on information sharing.

4.7.1 Administrative Aspects

The Minerals and Petroleum Resources Development Act, (Act 28 of 2002) (MPRDA)(the Act) legislates the official policy concerning the exploitation of the country's minerals and provides the regulatory framework for equitable access to and sustainable development of the nation's mineral resources and related matters. The Act addresses many issues, including the following:

- Transformation of the minerals and mining industry;
- Promotion of equitable access to South Africa's mineral resources;
- Promotion of investment in exploration, mining and mineral beneficiation;
- Socio-economic development of South Africa; and
- Environmental sustainability of the mining industry.

Other relevant statutes include *inter alia*:

- Mine Health & Safety Act, (Act 29 of 1996)
- Mine Health and Safety Act (Act 50 of 1991)
- National Environmental Management Act (Act 107 of 1998) and SEMAs
- National Water Act (Act 36 of 1998)
- Intergovernmental Relations Framework Act (Act 13 of 2005)
- Promotion of Administrative Justice Act (Act 3 of 2000)

The Mining Charter of 2002 is also a key document guiding the mining sector in South Africa.

In terms of the Act, new order mining rights may be registered, transferred and traded, while existing operators are guaranteed security of tenure. Mining rights are valid for a maximum of 30 years and

renewable for another 30 years, while prospecting rights are valid for up to five years and renewable for another three.

In terms of authorizing powers for prospecting permits and Mining rights:

1. Prospecting rights are approved by the Minister (National Office) and are normally valid for 2 years but can apply for renewal.
2. Mining permits are approved by the Regional Manager (Provincial Office) but are only valid for 2 years renewable for a term of 1 year and may not exceed an area of 1,5ha.
3. Applications for mining rights have to be accompanied by a Social Development Plan (local economic development plan (LED), of the area) and the applicant has to be at least 26% black empowered. Mining rights are approved by the Minister (National Department) for the life of the mine up to a maximum of 30yrs.

The Mining Charter on the other hand addresses more social aspects related to mining. The Charter provides for the complete elimination of hostels on South African mines by 2014, and introduces a sustainable element, premised on the understanding that the social licence to operate includes the environment, health and safety performance. Under the new charter, companies found not complying could face penalties, which could include the revoking of a mining company's licence.

Despite the Charter, the Department does not have any "in-house" guidelines to assist or guide the reviewing of permit applications. Each application is considered on an ad hoc basis. Where surface or groundwater has potential to be an issue, then a specialist report/study is required and comments provided by the Department of Water Affairs are also relied on. Further, the NEMA authorisation requirements may not be receiving the necessary focus because the environmental regulations in the MPRDA are considered to be based on NEMA principles. The Environmental Management Plans are sent to the DEADP for comment only and the comments are considered.

4.7.1.1 Government Task Team

A decision was made on 22 July 2005 between the Directors-General of DWA and DMR that a Government Task Team consisting of DWA, DMR and DST be established. The main task of the GTT is to facilitate solutions and high-level decision making on mine water management and related problems as well as the implementation of safe and sustainable mine closure options within the mining areas as identified in South Africa.

4.7.1.2 Regional Mining Development and Environmental Committee (RMDEC)

The Departments of Agriculture, Environmental Affairs, Water Affairs, Mineral Resources, together with Local Government, Cape Nature, City of Cape Town and the Petroleum Agency of South Africa (PASA) meet regularly to discuss and evaluate mining applications. However, there is still unresolved debate between the Department of Mineral Resources and The Department of Environmental Affairs together with the Local Government, regarding the need to obtain Land Use Planning Ordinance, 15 of 1985 (LUPO) authorisation and Environmental Authorisation prior to commencing with mining activities. The recent case of *City of Cape Town and Minister of Local Government, Environmental Affairs and Development Planning v Maccsand (Pty) Ltd and the Minister of Minerals and Energy and Others (Case No. 4217/2009 & 5932/2009)*, which is currently on appeal, highlights this. The central dispute³ to this case was for the court to rule on whether a mining permit or mining right granted under the Minerals and Petroleum Resources Development Act 28 of 2002 (MPRDA) exempts the holder from having to obtain authorisation for its mining activities in terms of laws which regulate the use of that land, in particular the provisions of the Land Use Planning Ordinance 15 of 1985 (LUPO) and the National Environment Management Act 107 of 1998 (NEMA). The implications of this judgement are

³ Department of Environmental Affairs and Development Planning, Media release – 23 August 2010, regarding the High Court Judgment: Mining subject to planning and environmental approvals.

significant as it affirms the correct interpretation of the Constitution and specifically how the powers conferred on each sphere of government must be recognised and taken into consideration during the interpretation of the various legislative frameworks which govern the three spheres. The ruling further substantiated the importance of the existing legislation in regard to decisions on mining initiatives. The requirements in terms of the MPRDA will ensure that a proposed mining operation will be optimal. Equally the requirements in terms of NEMA ensure that mining will be undertaken in an environmentally sustainable manner, with the requirements in terms of LUPO ensuring that the mining operations are desirable taking into account the planning considerations for the applicable municipal area.

4.7.2 Stakeholders

4.7.2.1 Department of Mineral Resources

The Department of Mineral Resources (DMR) aims to formulate and implement policy to ensure optimum use of the country's mineral resources. The National Department is mandated by the Mineral and Petroleum Resources Development Act (MPRDA), 2002. The National Department authorizes the mining rights and prospecting permits. The Regional Office is responsible for administrative support and regulation, especially in terms of the Mine Health & Safety Act, (Act 29 of 1996) and the Mine Health and Safety Act (Act 50 of 1991).

4.7.2.2 The Private Sector

Corporate restructuring of the South African mining industry has been in progress for more than a decade. The transformation includes the consolidation of ownership through minority buy-outs, the transfer of primary listings (and corporate head offices) offshore, as well as the purchase of South African mining assets by foreign companies.

Emphasis is being placed on stimulating black economic empowerment (BEE) in the industry. Several BEE-owned firms are now beginning to play an important role in the mining industry. The last few years has seen the emergence of several empowerment companies of substantial size in South Africa's mining and resources sector. Mining has thus become a focus of the Reconstruction and Development Programme in terms of entrepreneurial development, black economic empowerment and stimulation of employment and economic growth.

4.7.2.3 The Chamber of Mines of South Africa

The Chamber of Mines of South Africa is a voluntary, private sector employer's organisation founded in 1889 - and today acts as the principal advocate of the major policy positions endorsed by mining employers. The Chamber presents the formalised views of its membership to various organs of South Africa's national and provincial governments, and to other relevant policy-making and opinion-forming entities, both in and outside the country.

4.7.2.4 Other organisations

The South African Mining Development Association (SAMDA) has been in place since 2000 as an initiative by a group of people associated with various emerging and BEE mining companies. SAMDA focuses on the facilitation of critical services, via service providers, to ex-workers in the mining, energy and construction fields and their dependents and communities. The organisation places a central focus on its project management ability as the leverage point for delivering true value to South Africa's mine working communities. MDA's current programming can be divided into four broad elements:

- Skills development for current and retrenched mine, energy and construction workers
- Social development
- Education support

- SMME development and community economic empowerment

Many co-operative organisations serve the interests of specific sectors of the industry, including the Aluminium Federation of South Africa, the South African Copper Development Association, the Ferro-Alloy Producers Association, the Engineering Industries Federation of South Africa, the South African Stainless Steel Development Association and the Aggregate and Sand Producers Association of South Africa.

4.7.2.5 Small-scale mining

Numerous smaller groups and companies also carry out mining and beneficiation activities. They contribute towards the creation of employment opportunities which may not be considered economically attractive to the larger groups. The Small Scale Mining Board was launched in 2005 by the DMR with a mandate to assist with the resolution of limitations observed and identified within the small-scale mining sector. The DMR further insisted on the establishment of the South African Small-Scale Mining Chamber as an umbrella body that represents the interests of small scale miners in various forums, with the primary task to facilitate the process of making all small-scale operations legal and ensure that this sector flourishes.

4.7.2.6 Unions

All mineworkers are affiliated to a union. The National Union of Mineworkers (NUM) is the largest recognised collective bargaining agent representing workers in the Mining, Construction and Electrical Energy Industries in South Africa. NUM's Vision includes:

- To organise all Mine, Construction and Energy workers;
- To protect, promote and advance the interests of its members;
- Committed to turn dreams as a worker into reality.

4.7.3 Operational Issues

4.7.3.1 DWA Best Practice Guidelines

The DWA guidelines "*Best Practice Guidelines for Water Resource Protection in the South African Mining Industry*" provide a practical set of guidelines for the protection of water resources and address the various types of mining activities. During Phase 1 of the IWRM Plan Study, the concern has been identified that these DWA guidelines are not being applied as intended.

4.7.3.2 Access to Information

Information from DMR was not accessible during this study. Cooperation with other Government Departments initiatives (such as this IWRM Plan) appears to be limited.

The RMDEC meetings provide an opportunity for DEA and DWA to comment on mining applications. However, there are other institutions and legislative requirements to be adhered to as well, such as CARA and DoA, National Heritage Resources Act and SA Heritage Resource Association, ICM Act and Marine Coast where mines fall within coastal areas, for example.

4.7.3.3 Spatial planning

Due to the absence of information, the extent of spatial planning by DMR in this Province could not be determined. Spatial planning would assist in guiding mining applications of sensitivities while developing their applications, as well as streamline necessary infrastructure and infrastructure upgrades by concentrating activities in particular areas, with the option of phasing mining activities or limiting number of permits per area to make them more sustainable in the long run.

4.7.3.4 Regulation and Enforcement

In the legislative review, it was identified that the DMR could issue directives for environmental non-compliances. When required, the issuing of these Directives should be done in conjunction with the relevant Department (i.e. DWA for water related issues, and DEA for other environmentally related issues). Co-operation between DMR, DWA or DEA in the investigation of environmental non-compliances is critical.

4.7.3.5 Over Regulation

When considering what role the DMR can play in the implementation of IWRM, it is important not to introduce additional legislation, which will further complicate the legislative framework.

4.8 PLANNING AND DEVELOPMENT

With regards to Planning and Development, there are various Strategies and policies to guide development, and the Planning Ordinance to guide Planning. Planning and development are functions of Local Government, and are overseen by the Provincial Department of Development Planning.

4.8.1 Land Use Planning Ordinance 15 of 1985

Land Use Planning Ordinance 15 of 1985, Amended (LUPO). The LUPO guides Local Authorities in setting out development plans for their areas of jurisdiction. These development plans are detailed in Township Schemes, which outline the land-use zoning and building allowances per erf within the Municipal area. The Town Planning schemes and Spatial Development Frameworks for each municipality in the province have not been reviewed within the scope of this project.

4.8.2 iKapa Elihlumayo Growth and Development Strategy (2007)

The Growth and Development Strategy, Draft White paper (2007), was reviewed and is commented on in the subsequent chapter on [Existing Strategies and Plans](#).

4.8.3 Provincial Department of Development Planning

The Department is housed together with the Provincial Department of Environmental Affairs. This is a functional and operationally good pairing, as EIA applications should be considered in conjunction with planning requirements and likewise, environmental management should inform regional planning. The Department reviews development applications, implements the Development Facilitation Act, and comments on EIAs.

4.8.3.1 Environmental Management Frameworks (EMF)

An EMF is an important environmental planning tool. The planning process identifies environmental sensitivities and uses these, together with growth and development trends to determine appropriate regional planning and land use schemes. When considering the environmental sensitivities, the impacts to water resources, are considered. However, water availability in terms of service provisions (water supply and sanitation) are not necessarily included in determining limits to growth and development. This is highlighted in the Growth and Development strategy, where availability of water was not identified as a key element or limiting factor to growth. EMFs completed or in process within the Province, include the City of Cape Town Metropolitan area, Cape Winelands, and the Central Karoo District Municipality which has recently commenced its process. The EMFs have not been reviewed in the scope of this project, as this review is assumed to have been included in the PSDF process.

4.8.4 PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK (WCPSDF)

The purpose of the Western Cape Provincial Spatial Development Framework (WCPSDF) is to:

- Be the spatial expression of the Provincial Growth and Development Strategy (PGDS);
- Guide municipal (district, local and metropolitan) Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs) and provincial and municipal Spatial Developments Plans (SDPs);
- Help prioritise and align investment and infrastructure plans of other provincial departments, as well as national departments' and parastatals' plans and programmes in the Province;
- Provide clear signals to the private sector about desired development directions;
- Increase predictability in the development environment, for example by establishing “no go”, “maybe” and “go” areas for development; and
- Redress the spatial legacy of apartheid.

The study area of the WCPSDF covers the whole of the Western Cape Province. The WCPSDF was commissioned by the Western Cape Department of Environment Affairs and Development Planning (DEA&DP) as one of the eight lead strategies of iKapa Elihlumayo, the pillars of the Provincial Growth and Development Strategy (PGDS).

People, economic activity, social needs, infrastructure and natural resources are not evenly distributed across the landscape. These geographic variations are not incidental – some are the results of topography, other of history – but these variations and forces impact directly on economic growth, social justice, and the ability of the natural environment to support human activities now and in the future. Their spatial distribution (in part) reflects the distribution and intensity of natural features and resources across the landscape. In South Africa especially, spatial policies have historically been actively used as a political tool, to shape our economy, our social fabric, and the way we use our natural resources – in almost all instances to the benefit of the privileged few.

In particular, decisions about where to invest public sector resources have strong spatial impacts and can be used effectively to achieve developmental objectives, especially if all three spheres of government and their departments as well as state owned enterprises (SoEs) reinforce each other's investment decisions.

Furthermore, sustainable development outcomes require an integrated cross-sectoral approach to managing land and resources (both natural and human-made) especially water, at the local level. This is much easier to achieve in practice with a clear set of principles and policies that provide a spatial framework for co-operative governance and streamlined decision-making.

The WCPSDF deals both with issues that are explicitly spatial (for example where future residential development should be located), and with issues that have not, to date in South Africa, been viewed as part of spatial policy but which have significant spatial impacts (for example, water availability, recycling of waste, water reuse and recycling, limiting carbon emissions, or climate change mitigations). The scope of the WCPSDF is thus broader than traditionally associated with land use planning.

The WCPSDF is a long-term planning instrument, which is to be reviewed every five years. It is intended to implement the Framework Agreement on Growth and Development in the Western Cape signed by representatives of provincial and local government and their social partners on 14 November 2003. In particular, the WCPSDF will enable the National Spatial Development Perspective (NSDP) to be applied in the Province by defining a common spatial vision and direction around which to align the PGDS, Integrated Development Plans (IDPs), Urban Renewal Programmes (URPs) and Integrated Sustainable Rural Development Programmes (ISRDP) and other initiatives. In this way it will be made easier for all spheres of government to promote equitable and sustainable development

effectively and concertedly, as envisaged by the Intergovernmental Relations Framework Act, (Act 13 of 2005).

The WCPSPDF will be adopted as a structure plan in terms of the Land Use Planning Ordinance (LUPO). LUPO provides therefore that the general purpose of a structure plan is to lay down guidelines for the future spatial development of the area to which it relates (in this case the whole Province) in such a way as will most effectively promote “order and the general welfare of the community”. It is the intention of the Western Cape Government to make relevant policies contained in the WCPSPDF mandatory in terms of legislation and to include these policies in appropriate legislation.

4.9 DISASTER MANAGEMENT

4.9.1 Introduction

Globally hydro-meteorological hazards accounted for an estimated 79% of all disasters in 2010⁴. South Africa is prone to a variety of natural and human-induced water-related hazards, which occasionally lead to loss of property and lives. In the past decade, these hazard occurrences have become more frequent and severe.

Between March 2003 and November 2008, eleven (11) severe weather events lead to flooding damage of approximately R2.5 Billion⁵ in the Western Cape. Between 2009 and 2010 the Southern Cape and Beaufort West Municipality were both declared disaster areas due to widespread droughts in these areas.

The suffering and devastation that is consequential of disasters negatively influence the resources and infrastructure on which humans rely for survival, as well as quality of life. In the aftermath of a disaster it is critical to rapidly determine the exact nature of the impact and the resources and actions required to restore the pre-disaster situation or preferably to improve it by reducing vulnerability to possible future incidents.

It is even more important to intervene pro-actively before disasters occur by interrupting the process in which disaster risk develops through increasing hazards and vulnerability and decreasing capacity, by reversing this process: increasing coping capacity and decreasing vulnerability and hazards.

In order to understand how disasters impact the Western Cape Integrated Water Resources Management Plan, the principles of both Disaster Management and its guiding policies and legislation will be outlined and subsequent gaps in the implementation of disaster management relating to hydro-meteorological hazards will be identified.

4.9.2 Disaster Management

Disaster Management is defined as, ‘*The systematic process of using administrative decisions, organisation, operational skills and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activities, including structural and non-structural measures to prevent or limit (mitigation and preparedness) adverse effects of hazards.*’⁶

This definition implies that a hazard such as a flood or drought can be approached pro-actively. It is possible to plan to minimise eventualities from occurring and strategize an appropriate response

⁴ Guha-Sapir D, Vos F, Below R, with Ponserre S. *Annual Disaster Statistical Review 2010: The Numbers and Trends*. Brussels: CRED; 2011. [Online] Retrieved from: http://www.cred.be/sites/default/files/ADSR_2010.pdf (2011.06.15)

⁵ RADAR *Western Cape 2010: Risk and Development Annual Review*. University of Cape Town: PeriPeri Publications

⁶ South Africa. *National Disaster Management Framework of 2005*. 2005. Government Printers: Pretoria.

should they occur. The Disaster Management Cycle as depicted in **Figure 4.9.1** illustrates the various stages of pre- and post-disaster events and exemplifies the need to plan for identified hazards not only along line-functions and specific disciplines, but in an integrated fashion across organisations and disciplines in order to achieve effective outcomes for those concerned.

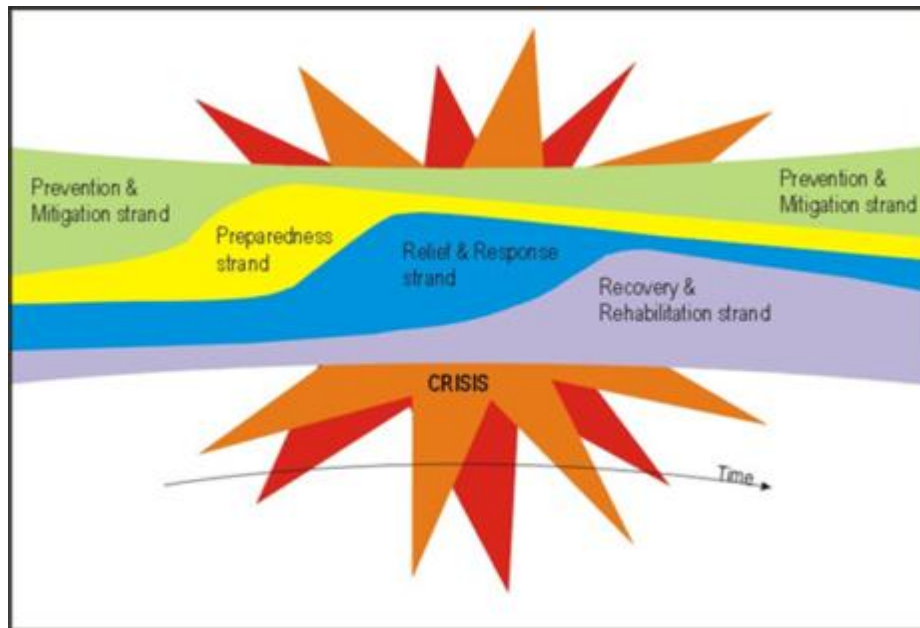


Figure 4.9.1 Disaster Management Cycle

The South African Disaster Management function is currently placed within the Department of Cooperative Governance at a National Level, and on Provincial and Local levels at the Department of Local Government. As a coordinating function, Disaster Management connects to the various government and private institutions, directly and through several platforms such as Disaster Management Advisory Forums which integrate development and planning efforts as illustrated in **Figure 4.9.2**. Disaster Management functions as a coordinating function between all Disaster Management stakeholders, rather than a line-function by itself.

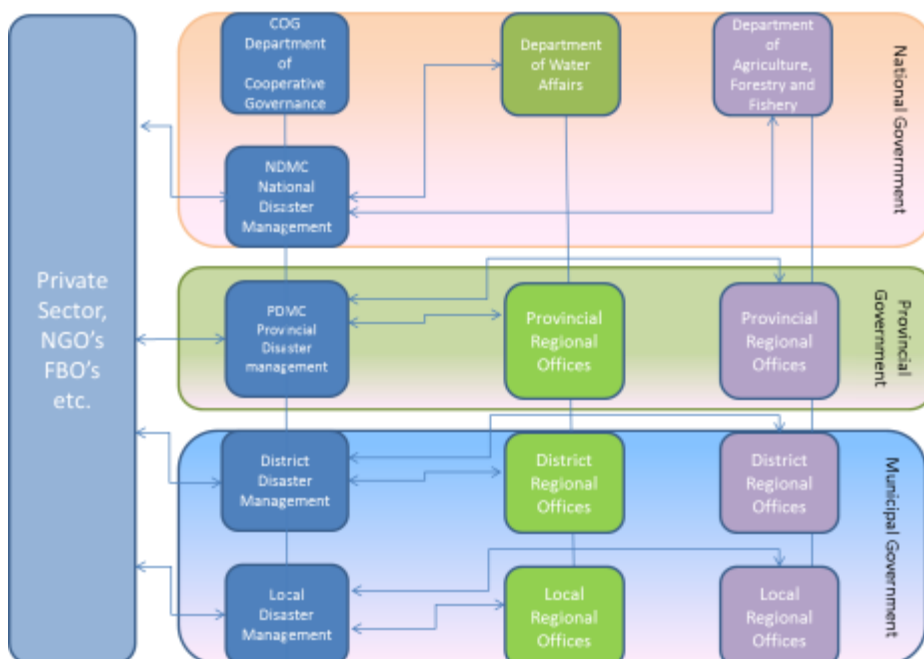


Figure 4.9.2 Intergovernmental and external relations between role-players and Disaster Management

4.9.3 South African Disaster Management Guiding Legislation and Policy

Before 1998, the role now fulfilled by the Disaster Management Discipline in part did not exist and was provided to some degree by Civil Protection under the Civil Protection Act of 1977, which had its origins in the civil defence corps established during the Second World War to provide a civil response to emergencies or disasters that resulted in mass casualties and damage. Civil Protection was however criticised as being too security- and reactive-oriented, which led to South Africa moving away from this approach to dealing with disasters during the 1990s and adopting a more pro-active stance which encompassed conscious risk management. The South African National Government recognised a need to establish an institutional framework that would allow for pro-active risk prevention and rapid action during an occurrence and subsequently took certain steps towards this end. These steps include:

- *White Paper on Disaster Management (1999): The White Paper introduced a new paradigm in the management of disasters, by placing an emphasis on risk reduction and preparedness;*
- *Disaster Management Act: The White Paper led to the promulgation of the Disaster Management Act, Act 57 of 2002, which is the regulatory framework for disaster management in South Africa. The Department of Cooperative Governance and Traditional Affairs (CoGTA), through the National Disaster Management Centre (NDMC), administers the Act;*
- *National Disaster Management Framework of 2005: The NDMC has prepared a National Disaster Management Framework, which aims to guide the development and implementation of disaster management in the country; and*
- *National Disaster Risk Management Centre Guidelines: The NDMC has developed guidelines for the establishment of disaster management centres (DMC's).*

All national, provincial and municipal departments, parastatals and private organisations operating within the Western Cape Province have a responsibility to the communities they serve in ensuring a safer and risk free environment. The two main guiding policy documents which highlight these responsibilities are the Disaster Management Act No 57 of 2002 and the National Disaster Management Framework of 2005 respectively.

4.9.3.1 Disaster Management Act No. 57 of 2002 (DMA)

The Disaster Management Act No. 57 of 2002 (DMA) provides for:

- *'An integrated and co-ordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disaster and post-disaster recovery;*
- *The establishment of national, provincial and municipal disaster management centres;*
- *Disaster management volunteers; and*
- *Matters incidental hereto.'*

The Act defines the requirements of National, Provincial and Municipal Organs of State, which include the preparation of disaster management plans and strategies (Sections 25, 38, 52 and 53), responsibilities in the event of a disaster (Sections 26, 40 and 54) and the processes and procedures involved in the declaration of a disaster (Sections 27, 41 and 55). The Act further outlines funding principles for post-disaster recovery and rehabilitation (Sections 56 and 57) and provides for disaster management volunteers (Section 58).

The Act calls for guidelines which 'provide a coherent, transparent and inclusive policy on disaster management appropriate for the Republic as a whole' (Section 7(1)) which was promulgated as the National Disaster Management Framework in 2005.

The main implication of the Disaster Management Act for water resource management is that those government departments or other legislated agencies responsible for managing water resources have a responsibility to investigate and monitor water-resource related disaster risks, to actively work towards reducing such risks, and to ensure preparedness, within their sphere of influence. They must

be able to respond to the impact of those risks that cannot be avoided or sufficiently reduced in order to soften the blow of such incidents on life, property, the environment and livelihoods. The implication is that water-resource management bodies must plan for managing the risk and the impact of water-related disasters in collaboration with other disaster management stakeholders.

4.9.3.2 National Disaster Management Framework of 2005 (NDMF)

The National Disaster Management Framework of 2005 (NDMF) aims to address integrated disaster management implementation through the inclusion of risk reduction models into developmental planning in disaster prone communities. Disaster prevention and mitigation ideologies will be emphasized throughout all spheres of government and private and third sector involvement encouraged in disaster risk reduction and response.

The NDMF comprises of four (4) Key Performance Areas (KPA's) namely Integrated Institutional Capacity, Disaster Risk Assessment, Disaster Risk Reduction and Disaster Response and Recovery. These KPA's are followed by two (2) Enablers that are cross-cutting elements of disaster management namely, Information Management and Communication and Education, Training, Public Awareness and Research.

The NDMF is an implementation framework and therefore does not have new implications for water resource stakeholders beyond that of the Disaster Management Act. The Framework does however further structure the disaster management process and makes it easier for the uninitiated to find levels of interaction with the Disaster Management concept.

4.9.4 Operational Issues

Although the DMA makes provision for the entire Disaster Continuum and its KPAs, certain gaps in the implementation thereof as well as the management of the multi-faceted disaster management process relating to water hazards are highlighted below subsequent to consultation with the provincial experts and officials.

4.9.4.1 Inadequate funding for preventative measures against droughts and flooding hazards.

This crucial gap is based on the central agreement among Disaster Management practitioners, who express disaster risk as follows:

$$\text{Disaster Risk} = \frac{\text{Hazard} \times \text{Vulnerability}}{\text{Capacity}}$$

Disaster Risk thus consists of at least three variables which can be influenced or manipulated to affect the level of disaster risk. This would imply that in order to decrease a disaster risk, one could aim to decrease the probabilities of a said hazard from occurring as well as the vulnerabilities of the organisations/communities exposed to that hazard and at the same time could attempt to increase all affected parties' capacity to handle such an occurrence. The focus is thus on risk reduction, prevention and mitigation instead of response only as was the case a few decades ago. Since the effects of many mitigating and preventative measures are difficult to track, many of these valuable projects are not sustained for long-enough periods to make the necessary impacts as project sponsors and donors may desire quick fixes and positive performance indicators. As an example, the public awareness and water restrictions during the latest Eden and Central Karoo drought disasters have been an invaluable and relatively inexpensive tool in water demand management.

4.9.4.2 Adequate flood line mapping is inaccessible or non-existent

As flood lines are integral elements of flood risk reduction and preparedness planning, the few flood lines that are mapped and available are not sufficient for effective planning for all relevant departments. Parties attempting to conduct disaster risk assessments or even to conduct flooding preparedness planning are often confronted with a lack of flood lines for river systems.

4.9.4.3 Integrated pollution or spill response.

A more clearly defined and integrated spill / pollution response should be investigated for all three spheres of government and relevant departments in conjunction with the possible affected landowners. This is in terms of roles and responsibilities as well as a comprehensive response plan for the water body implicated, especially in urban areas. The roles and responsibilities of different stakeholders and responders in pollution incidents can be discussed and agreed upon and then recorded in the Western Cape Disaster Preparedness, Response and Relief Plan which can then become a standard operating procedure for such incidents.

4.9.4.4 Creating understanding/awareness of roles and responsibilities.

A better mutual understanding of the legal powers of the Minister of Water Affairs, the Minister of Agriculture and the Minister of Local Government by the officials in Water Affairs, Agriculture, Disaster Management and in local government is required for the efficient management of water related risks/disasters/incidents. For example the declaration of a disaster by the Minister in terms of the Water Service Act as well as the regulations the Minister of Agriculture may make in respect of flood relief measures need to be explained to the various officials in the supporting or involved departments.

4.9.4.5 Effective integration of water resource planning.

Various water resource stakeholders in conjunction with disaster management need to develop ways of cross-pollination of plans and projects in order to work together to efficiently reduce disaster risk and manage disaster response with regards to water related hazards. Drought management plans and generic municipal drought management guidelines were developed during the drought situation in the Western Cape in 2010/2011, but their effective implementation and enforcement as well as awareness should be fostered by all relevant role-players.

4.9.4.6 Developments may increase disaster risk.

Planning of projects is not always managed with a risk reduction framework in mind, which could lead to ineffective project outcomes. This could lead to further damage and increased risk. Development approval only above established floodlines is of fundamental importance to avoid infrastructure damage, pollution impacts and flood risk. A further example is the ineffective clearing and stacking of invasive alien species from catchments which result in higher fire fuel loads in areas which could change soil composition after fires and lead to soil erosion. This coupled with irregular sediment management could increase the risk of recurrent flooding. Lack of removal of alien species from catchments can also result in infrastructure damage from large logs washed down during flood events.

4.9.4.7 Cooperation, understanding and buy-in with regards to the importance of Disaster Management

The availability of senior officials to participate in existing disaster management advisory forum structures and joint strategic planning of risk reduction as well as emergency response would strengthen existing working relationships. This would ensure buy-in and cooperation, especially with Department of Water Affairs. Capacity constraints limit DWA's ability to participate.

4.9.4.8 Pro-active, long term drought planning.

Long term water security planning is required in order to effectively prepare for and possibly mitigate future drought situations thus reducing drought risk. The recent droughts in Eden and the Central Karoo impelled the implementation of drought relief projects such as desalination, boreholes and water reuse (reverse osmosis). Such technologies and measures could have averted the extent of the severe shortage in the first place if thorough drought planning had been in place. A culture of risk avoidance and risk reduction should be fostered in water infrastructure management.

4.9.4.9 Focussed climate change response planning is required.

Provincial inclusion of the influence of climate change and possible adaptation and response strategies with special focus on flooding and drought is required.

4.9.4.10 Lengthy funding process.

The mechanism to access flood damage recovery funding is currently a lengthy and cumbersome process, with funds requested often not being released in full, and up to a year waiting period for the release of such.

4.9.4.11 Delayed response and rehabilitation of flood damage.

Flood damage assessments should be carried out as soon as possible and in order to rapidly assess the damage, instant access to specialists is required. In addition, assessments should include not only the areas directly damaged but all areas linked to the damaged infrastructure such as the surrounding floodplains and drainage elements.

4.9.4.12 Community members and business institutions are not fully capitalised

The inclusion of Petro-SA during the drought situation in the Eden district has played a major role in the ability to fund response mechanisms in that region and has enabled the construction of a desalination plant. Such ventures need to be explored further, prior to the hazard events. Well informed public are key not only for effective response (heeding early warnings and evacuations) but also vital in the implementation of mitigation efforts (water usage restrictions, awareness).

4.10 COOPERATIVE GOVERNANCE

Chapter 3 of the Constitution of South Africa, 1996, provides for the principles of co-operative government and intergovernmental relations and states in section 41 (1) that *the three spheres of government should co-operate with one another in mutual trust and good faith by:*

- a) *fostering friendly relations;*
- b) *assisting and supporting one another;*
- c) *informing one another of and consulting one another on matters of common interest;*
- d) *co-coordinating their actions and legislation with one another;*
- e) *adhering to agreed procedures; and*
- f) *avoiding legal proceedings against one another.*

In addition, the Intergovernmental Relations Framework Act, Act No 13 of 2005 (IGRFA) provides within the principles of co-operative government a framework for the national, provincial and local governments and all organs of state within those governments, to facilitate co-ordination of the implementation of policy and legislation, including:

- a) coherent government;
- b) effective provision of services;
- c) monitoring implementation of policy and legislation; and

- d) realization of national priorities.

IGRFA seeks to improve inter-governmental coordination and reduce “silo” effects. In conducting their affairs the national government, provincial governments and local governments must seek to achieve the object of the IGRFA, participating in intergovernmental structures of which they are members. In relation to this and of particular importance to this project, are the “Guidelines on practical application of the IGRFA. DWAF Functions”, which outline the responsibilities of DWA in terms of IGRFA.

The Department of Local Government, in particular, the Directorate: Service Delivery Integration is responsible for ensuring implementation and application of the IGRFA. Within its ambit, the unit has already structured Local Government interactions, which will be discussed further in the next section. As a next step, the unit is imminently to embark on an audit of all the Provincial Departmental Strategic Forum meetings, in order to streamline the number of forums and meetings, etc., that the Departments participate in.

4.10.1 Integration across Local Government

There are two types of Minister – Mayor consultations in the Western Cape, i.e. the MINMAY and the MINMAYTECH, each of which is described below. **Figure 4.10.1** illustrates the interaction of these consultations with the District Co-ordinating forum and the Premier’s Co-ordinating Forum.

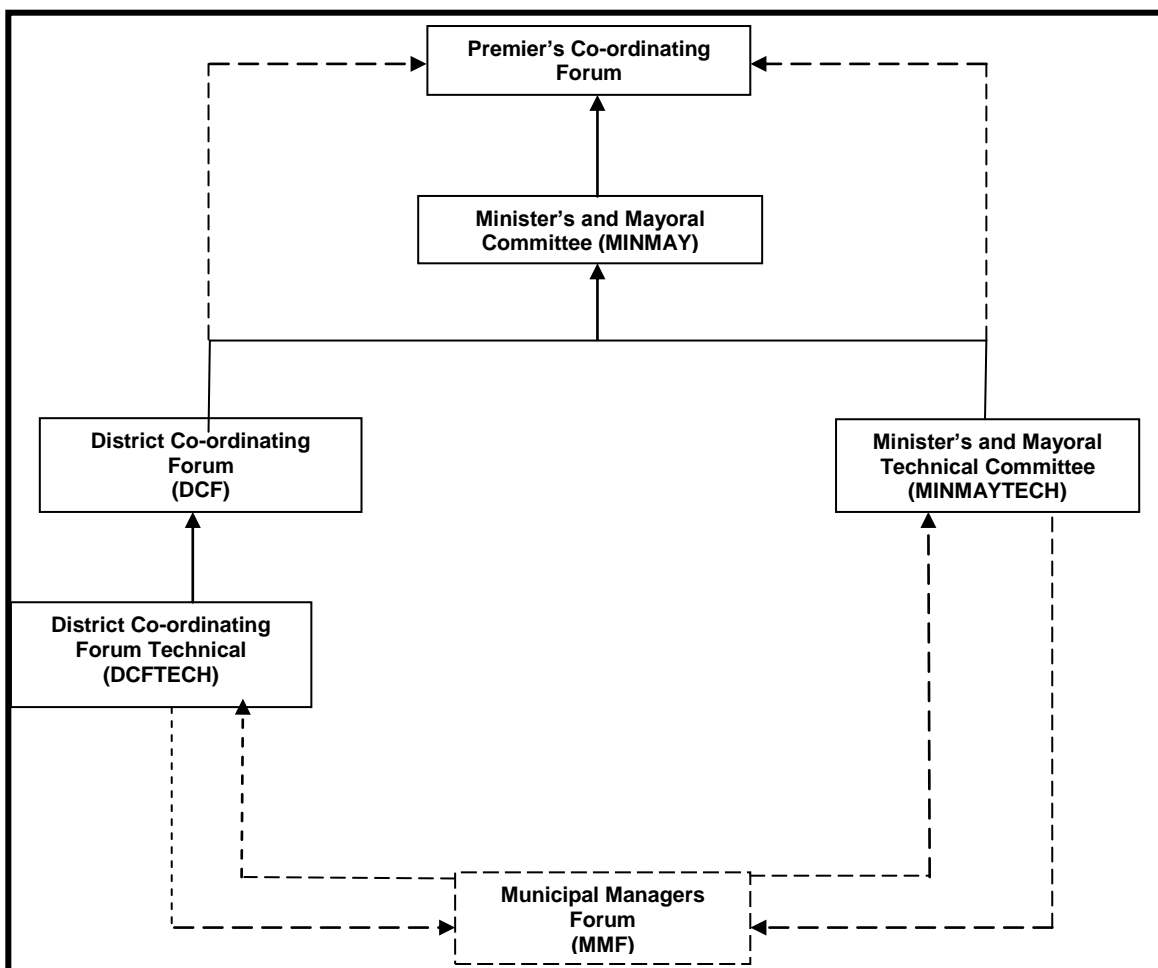


Figure 4.10.1 Western Cape Intergovernmental Structures

4.10.1.1 MINISTER'S AND MAYORAL COMMITTEE (MINMAY)

The MINMAY is a consultative forum aimed at increasing co-ordination, communication and horizontal and vertical integration with the Metro, district municipalities, local municipalities, SALGA Western Cape and Province through information sharing, dialogue, capacity building and consultation on matters of mutual interest, including:

- a) the possible implementation of national policy and legislation affecting local government interests;
- b) matters arising in the Premier's Co-coordinating Forum (PCF), Minister's and Mayoral Technical Committee (MINMAYTECH) and other intergovernmental forums affecting local government interests in the Province;
- c) draft national and provincial policies and legislation relating to matters affecting local government interests in the Province;
- d) the possible implementation of national and provincial policies and legislation relating to such matters;
- e) the co-ordination of provincial and municipal development planning to facilitate coherent planning in the Province;
- f) the co-ordination of and alignment of strategic objectives of government as set out in the relevant MTEF period;
- g) any other matter that affects the interests of local government in the Province; and
- h) Recommend strategic items to be placed on PCF agenda.

The MINMAY is comprised of the following representatives:

- (a) Minister for Local Government (Chairperson)
- (b) Provincial ministers and heads of departments depending on the agenda items
- (c) Mayors or delegated councilors of municipalities
- (d) Head: Department of Local Government
- (e) Municipal Managers
- (f) Administrators of municipalities that are subject to an intervention in terms of Section 139 of the Constitution
- (g) Chairperson of SALGA Western Cape
- (h) Agencies and government officials depending on the agenda items
- (i) Secretariat of the forum from the Department of Local Government.

The Minister of Local Government is the Chairperson of the Minister's and Mayoral Committee and may invite any person not mentioned above to a meeting of the forum.

4.10.1.2 MINISTER'S AND MAYORAL TECHNICAL COMMITTEE (MINMAYTECH)

The MINMAYTECH is a consultative forum aimed at increasing co-ordination, communication and horizontal and vertical integration with the Metro, district municipalities, local municipalities, SALGA Western Cape and provincial departments through information sharing, dialogue, capacity building and consultation on matters of mutual interest, including:

- (a) The possible implementation of national policy and legislation affecting local government interests;
- (b) matters arising in the Premier's Co-coordinating Forum (PCF), Minister's and Mayoral Committee (MINMAY) and other intergovernmental fora affecting local government interests in the Province;
- (c) draft national and provincial policies and legislation relating to matters affecting local government interests in the Province;
- (d) the possible implementation of national and provincial policies and legislation relating to such matters;
- (e) the co-ordination of provincial and municipal development planning to facilitate coherent planning in the Province as a whole;

- (f) the co-ordination and alignment of strategic objectives of government as set out in the relevant MTEF period;
- (g) any other matters that affect the interests of local government in the Province; and
- (h) assessment of submitted agenda items and the recommendation of draft agenda to PCF and/or MINMAY.

The MINMAYTECH meets at least once a quarter. The MINMAYTECH is comprised of the following representatives:

- (a) Head of Department for Local Government (Chairperson)
- (b) Heads of Provincial Departments depending on the agenda items;
- (c) Municipal Managers;
- (d) SALGA Western Cape;
- (e) Agencies and government officials depending on the agenda items; and
- (f) Secretariat of the forum from the Department of Local Government.

The Head of the Department of Local Government is the Chairperson of the Minister's and Mayoral Technical Committee and may invite any person not mentioned above to a meeting of the forum.

The MINMAYTECH provides a good opportunity to discuss issues regarding WCDM implementation and the obstacles thereof.

4.10.2 Cooperative Governance within Provincial Departments

The Western Cape Provincial Government has outlined a set of Provincial Strategic Objectives that aims to foster cooperative governance in terms of service delivery in the Western Cape. The Provincial Strategic Objective 7 (PSO7): "Mainstreaming Sustainability and Optimising Resource-Use Efficiency" is one of the twelve strategic objectives identified by the Provincial Cabinet for implementation towards achieving its Vision. The Department of Environmental Affairs and Development Planning (DEADP) was tasked as the Lead Department for driving the PSO7.

The Provincial Departments and the National Department of Water Affairs forms part of the PSO7 Working Group that was established to drive the key policy priority area on "Water Management". The IWRM Action Plan is a key activity of the Water Management Working Group, where cooperative governance on water management is discussed. The Departments report back on activities implemented to the PSO7 Steering Committee that was established.

On technical aspects and operational issues, the Departments do interact in topic specific forums, some of which have already been discussed, such as CCAW, RMDEC, and UBCEG etc.

4.11 FINANCIAL MANAGEMENT

Financial management is guided by the Public Financial Management Act (Act 1 of 1999) (PFMA), the Municipal Financial Management Act (Act 56 of 2003)(MFMA), and the Division of Revenue Act, (Act 6 of 2011) (DoRA). PFMA is geared more towards the National and Provincial Departments, whereas the MFMA is geared more towards Local Governments and municipalities. The National Treasury together with the Department of Finance and the lead institutions are responsible for monetary issues, approving budgets, etc.

4.11.1 Investment

According to the Infrastructure Barometer published by Africa and based on figures provided by the National Treasury for 2002/2003, total investments in water supply and sanitation in 2002/2003⁷ were as follows:

- 1,137 million Rand for water supply by municipalities
- 485 million Rand for sanitation by municipalities
- 428 million Rand for water supply and some water resources development by Water Boards

Total investments thus stood at 2,450 million Rand or about US\$ 250 million, corresponding to about US\$ 5/capita. The Compass does not mention any investments by DWA.

The 2002 White Paper estimated investments in the sector to be much higher, at 5bn Rand annually. This included 1.2 billion Rand of investments made by DWA, 1.0 billion Rand by Water Boards and 2.8 billion rand by municipalities.

4.11.2 Free Basic Water

South Africa has introduced a policy of free basic services, including water, electricity and solid waste collection. As part of that policy, every household is to receive the first 6 cubic meters per month for free. The policy was not to be implemented immediately, but gradually and within the means of each municipality. Municipalities decide if free basic water is made available only to the poor, and how the poor will be defined and identified. Most municipalities provide free basic water to the great majority of their residents. The cost of the policy has been estimated at 1.5bn Rand or 0.15% of GDP. The subsidy is financed either through subsidies from the national government from the "equitable share" automatic transfers, through cross-subsidies from other users or local taxes. Out of 169 service providers, 29 (including Cape Town) provide free basic water to all their residents, 136 to some and 4 very small municipalities to none. Those service providers that provide free basic water to some actually provide it to the great majority of their residents. For example, the city of eThekweni provides free basic water to 99% of households in its service area and the municipalities in the Gauteng area to 90%. In 2010 the program reached 86% of all households and 87% of poor households.

However, around 75% of all free water benefits people who can afford to pay for it. The policy is more successful in wealthier municipalities than in low-income rural areas. Therefore, this is one of the reasons why the government is reviewing its implementation strategy for free basic water, possibly through registers of poor users.

It has been suggested to also adopt a policy of free basic sanitation, which is likely to present even greater challenges.

4.11.3 Funding Options

Municipal infrastructure investments are financed from the following sources:

- through municipal and provincial grants, e.g. equitable share, MIG and RBIG;
- through loans from banks;
- through internal cash generation e.g. water tariffs; and
- through other sources.

The larger municipalities rely more on loans and on internal cash generation, while the smaller ones depend more on grants and other sources of funding.

⁷ Recent summary of investment was not available at time of compiling this report.

4.11.3.1 Funding Grants

4.11.3.1.1 Equitable Share

All municipalities receive a constitutionally mandated share of national tax revenues as an unconditional recurrent grant, called "equitable share". The formula benefits poorer municipalities. The Division of Revenue Act, (Act 6 of 2011) apportions the equitable share of national revenue.

In terms of Section 2 of DoRA, the objects of this Act are to—

- a) *provide for the equitable division of revenue raised nationally among the three spheres of government;*
- b) *promote predictability and certainty in respect of all allocations to provinces and municipalities, in order that provinces and municipalities may plan their budgets over a multi-year period and thereby promote better coordination between policy, planning and budgeting;*
- c) *promote transparency and accountability in the resource allocation process, by ensuring that all allocations are reflected on the budgets of receiving provinces and municipalities and by ensuring that the expenditure of conditional allocations is reported on by the receiving provinces and municipalities.*

Revenue raised nationally in respect of the financial year must be divided among the national, provincial and local spheres of government for their equitable share allocations as set out in **Figure 4.11.1**.

The DoRA outlines the conditional allocations to both provinces and municipalities in terms of the allocations in respect of the financial year from the national government's share of revenue raised nationally (see **Figure 4.11.2**).

Conditional allocations to provinces

7.(1) Conditional allocations to provinces in respect of the financial year from the national government's share of revenue raised nationally are set out in Column A of the following Schedules:

- (a) Schedule 4, specifying allocations to provinces to supplement the funding of programmes or functions funded from provincial budgets.*
- (b) Schedule 5, specifying specific purpose allocations to provinces;*
- (c) Schedule 7, specifying allocations-in-kind to provinces for designated special programmes;*
- (d) Schedule 8, specifying incentives to provinces to meet targets with regard to priority government programmes, and*
- (e) Schedule 9, specifying funds that are currently not allocated to specific provinces, that may be released to provinces to fund disaster response within a period from three days up to three months following a declared disaster in terms of the conditions of the Disaster Management Act.*

(2) An envisaged division of conditional allocations to provinces from the national government's share of revenue anticipated to be raised nationally for the next financial year and the 2013/14 financial year, which is subject to the annual Division of Revenue Acts for those years, is set out in Column B of the Schedules referred to in subsection (1).

Conditional allocations to municipalities

8.(1) Conditional allocations to local government in respect of the financial year from the national government's share of revenue raised nationally are set out in Column A of the following Schedules:

- (a) Schedule 4, specifying allocations to municipalities to supplement the funding of functions funded from municipal budgets;*
- (b) Schedule 6, specifying specific-purpose allocations to municipalities.*
- (c) Schedule 7, specifying allocations-in-kind to municipalities for designated special programmes;*
- (d) Schedule 8, specifying incentives to municipalities to meet targets with regard to priority government programmes; and*

- (e) *Schedule 9, specifying funds that are currently not allocated to specific municipalities, that may be released to local government or municipalities to fund disaster response within a period from three days up to three months following a declared disaster in terms of the conditions of the Disaster Management Act.*

The abovementioned Schedules 4, 5, 6, 7, 8 and 9 are included in **Figure 4.11.3** to **Figure 4.11.8**.

SCHEDULE 1

EQUITABLE DIVISION OF REVENUE RAISED NATIONALLY AMONG THE THREE SPHERES OF GOVERNMENT

Spheres of Government	Column A	Column B	
	2011/12 Allocation	Forward Estimates	
		2012/13	2013/14
	R'000	R'000	R'000
National ^{1,2}	566 322 576	624 832 817	689 463 889
Provincial	288 492 831	305 725 449	323 604 408
Local	34 107 901	37 573 396	39 960 288
TOTAL	888 923 308	968 131 662	1 053 028 585

1. National share includes conditional allocations to provincial and local spheres, general fuel levy sharing with metropolitan municipalities, debt service cost and the contingency reserve.
2. The direct charges for the provincial equitable share are netted out.

Figure 4.11.1 Schedule 1 equitable division of revenue raised nationally among the three spheres of government.

With respect to the municipalities of the Western Cape, Schedule 3 outlines the allocation in respect of the equitable share of the local government sphere's share of revenue raised nationally, as shown in Figure 4.11.2.

SCHEDULE 3

DETERMINATION OF EACH MUNICIPALITY'S EQUITABLE SHARE OF THE LOCAL GOVERNMENT SPHERE'S SHARE OF REVENUE RAISED NATIONALLY

Number	Municipality	National Financial Year		
		Column A	Column B	
		2011/12 Allocation	Forward Estimates	
		2012/13	2013/14	
		R'000	R'000	R'000
WESTERN CAPE				
A	CPT City of Cape Town	970 473	1 090 987	1 163 859
B	WC011 Matzákama	32 066	35 495	37 821
B	WC012 Cederberg	23 008	25 447	27 106
B	WC013 Bergrivier	19 898	22 010	23 445
B	WC014 Saldanha Bay	29 296	32 575	34 724
B	WC015 Swartland	22 887	25 392	27 058
C	DC1 West Coast District Municipality	68 652	70 992	72 151
Total: West Coast Municipalities		195 808	211 911	222 306
B	WC022 Witzenberg	40 561	44 855	47 781
B	WC023 Drakenstein	62 476	69 437	74 007
B	WC024 Stellenbosch	36 977	41 252	43 992
B	WC025 Breede Valley	56 804	63 024	67 160
B	WC026 Langeberg	45 172	49 943	53 197
C	DC2 Cape Winelands District Municipality	200 739	207 135	210 408
Total: Cape Winelands Municipalities		442 730	475 646	496 545
B	WC031 Theewaterskloof	46 935	51 892	55 272
B	WC032 Overstrand	31 156	34 666	36 957
B	WC033 Cape Agulhas	14 805	16 402	17 477
B	WC034 Swellendam	16 648	18 425	19 629
C	DC3 Overberg District Municipality	41 692	43 229	44 363
Total: Overberg Municipalities		151 236	164 615	173 698
B	WC041 Kannaland	16 840	18 619	19 833
B	WC042 Hessequa	23 227	25 750	27 438
B	WC043 Mossel Bay	36 942	40 915	43 589
B	WC044 George	72 201	80 365	85 706
B	WC045 Oudtshoorn	37 618	41 577	44 281
B	WC047 Bitou	20 415	22 696	24 195
B	WC048 Knysna	26 687	29 726	31 695
C	DC4 Eden District Municipality	122 912	126 954	129 701
Total: Eden Municipalities		356 842	386 601	406 437
B	WC051 Laingsburg	8 239	9 097	9 690
B	WC052 Prince Albert	9 200	10 149	10 809
B	WC053 Beaufort West	28 956	32 081	34 194
C	DC5 Central Karoo District Municipality	11 535	12 304	12 906
Total: Central Karoo Municipalities		57 931	63 632	67 599
Total: Western Cape Municipalities		2 175 019	2 393 393	2 530 444
National Total		34 107 901	37 573 396	39 960 288

Figure 4.11.2 Schedule 3 division of revenue raised nationally among the municipalities of the Western Cape.

SCHEDULE 4

ALLOCATIONS TO PROVINCES TO SUPPLEMENT THE FUNDING OF PROGRAMMES OR FUNCTIONS FUNDED FROM PROVINCIAL BUDGETS

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B	
					2011/12 Allocation	Forward Estimates	
						2012/13	2013/14
					R'000	R'000	R'000
Agriculture, Forestry and Fisheries (Vote 26)	Comprehensive Agricultural Support Programme Grant	To expand the provision of agricultural support services, promote and facilitate agricultural development by targeting smallholder and previously disadvantaged farmers	General conditional allocation to provinces	Eastern Cape	174 985	195 209	223 523
				Free State	102 932	114 829	131 484
				Gauteng	41 173	45 931	52 594
				KwaZulu-Natal	164 691	183 726	210 375
				Limpopo	154 398	172 243	197 226
				Mpumalanga	102 932	114 829	131 484
				Northern Cape	72 052	80 380	92 039
				North West	133 812	149 277	170 930
				Western Cape	82 346	91 863	105 188
				TOTAL	1 029 321	1 148 287	1 314 843
Basic Education (Vote 15)	Education Infrastructure Grant	To help accelerate construction, maintenance, upgrading and rehabilitation of new and existing infrastructure in education; and to enhance capacity to deliver infrastructure in education	General conditional allocation to provinces	Eastern Cape	968 435	1 058 635	1 116 860
				Free State	418 776	458 483	483 699
				Gauteng	461 011	508 633	536 608
				KwaZulu-Natal	1 158 136	1 270 878	1 340 777
				Limpopo	874 897	865 485	913 086
				Mpumalanga	472 881	463 237	488 715
				Northern Cape	289 158	317 450	334 909
				North West	469 967	515 812	544 182
				Western Cape	385 039	424 558	447 909
				TOTAL	5 498 300	5 883 171	6 206 745
Health (Vote 16)	(a) Health Infrastructure Grant	To supplement provincial funding of health infrastructure to accelerate the provision of health facilities and ensure proper maintenance of provincial health infrastructure	General conditional allocation to provinces	Eastern Cape	299 754	327 673	345 695
				Free State	129 621	141 911	149 716
				Gauteng	142 694	157 434	166 093
				KwaZulu-Natal	358 471	393 367	415 002
				Limpopo	270 802	267 888	282 622
				Mpumalanga	146 368	143 383	151 269
				Northern Cape	89 501	98 258	103 662
				North West	145 466	159 656	168 437
				Western Cape	119 179	131 411	138 638
				TOTAL	1 701 856	1 820 981	1 921 134

SCHEDULE 4

ALLOCATIONS TO PROVINCES TO SUPPLEMENT THE FUNDING OF PROGRAMMES OR FUNCTIONS FUNDED FROM PROVINCIAL BUDGETS

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B				
					2011/12 Allocation	Forward Estimates				
						2012/13	2013/14			
Health (Vote 16)	(b) Health Professions Training and Development Grant	Support provinces to fund service costs associated with training of health professionals; development and recruitment of medical specialists in under-served provinces; and support and strengthen undergraduate and postgraduate training processes in health facilities	Nationally assigned function to provinces	Eastern Cape	R'000	R'000	R'000			
				Free State	170 071	178 730	188 560			
				Gauteng	124 444	130 930	138 131			
				KwaZulu-Natal	690 803	725 310	765 202			
				Limpopo	249 917	261 860	276 262			
				Mpumalanga	99 730	103 913	109 628			
				Northern Cape	80 718	85 208	89 894			
				North West	65 510	68 583	72 356			
				Western Cape	88 323	93 522	98 666			
				Western Cape	407 794	428 120	451 667			
				TOTAL	1 977 310	2 076 176	2 190 366			
				(c) National Tertiary Services Grant	To compensate tertiary facilities for the additional costs associated with spill over effects; and to ensure adequate provision of tertiary health services for all South African citizens	Nationally assigned function to provinces	Eastern Cape	609 327	660 693	698 110
							Free State	715 204	769 964	800 000
							Gauteng	2 759 968	2 933 361	3 100 895
KwaZulu-Natal	1 201 831	1 303 824	1 408 053							
Limpopo	267 314	277 314	287 314							
Mpumalanga	91 879	105 970	120 270							
Northern Cape	235 948	245 948	255 948							
North West	194 280	209 280	224 280							
Western Cape	1 973 127	2 182 468	2 494 337							
TOTAL	8 048 878	8 688 822	9 389 207							
Higher Education and Training (Vote 17)	Further Education and Training Colleges Grant	To ensure the successful transfer of the further education and training colleges function to the national Department of Higher Education and Training	General conditional allocation to provinces				Eastern Cape	627 611	681 826	761 118
							Free State	291 772	314 461	346 682
							Gauteng	1 012 089	1 101 754	1 233 994
							KwaZulu-Natal	754 793	828 470	939 709
				Limpopo	490 395	531 141	590 206			
				Mpumalanga	320 378	341 147	370 651			
				Northern Cape	65 656	75 558	89 875			
				North West	236 178	254 511	280 449			
				Western Cape	527 117	576 220	649 704			
				TOTAL	4 325 989	4 705 088	5 262 388			

SCHEDULE 4

ALLOCATIONS TO PROVINCES TO SUPPLEMENT THE FUNDING OF PROGRAMMES OR FUNCTIONS FUNDED FROM PROVINCIAL BUDGETS

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B				
					2011/12 Allocation	Forward Estimates				
						2012/13	2013/14			
Transport (Vote 37)	(a) Provincial Roads Maintenance Grant	To supplement provincial roads investments and support preventative maintenance on provincial road networks; and to ensure provinces implement and maintain road asset management systems	General conditional allocation to provinces	Eastern Cape	R'000	R'000	R'000			
				Free State	1 034 086	1 215 920	1 312 210			
				Gauteng	447 165	525 794	567 433			
				KwaZulu-Natal	566 917	583 226	625 542			
				Limpopo	1 236 648	1 454 099	1 569 251			
				Mpumalanga	934 208	1 098 478	1 185 468			
				Northern Cape	1 016 603	1 253 564	1 449 002			
				North West	308 760	363 053	391 803			
				Western Cape	501 826	590 067	636 795			
				Western Cape	411 141	483 437	521 720			
				TOTAL	6 457 354	7 567 638	8 259 224			
				(b) Public Transport Operations Grant	To provide supplementary funding towards public transport services provided by provincial departments of transport	Nationally assigned function to provinces	Eastern Cape	166 953	180 461	196 061
							Free State	184 566	195 515	208 162
							Gauteng	1 577 612	1 635 695	1 702 781
KwaZulu-Natal	773 473	815 611	864 281							
Limpopo	249 498	274 561	303 510							
Mpumalanga	420 099	436 626	455 715							
Northern Cape	37 565	42 715	48 662							
North West	77 211	89 230	103 111							
Western Cape	666 255	690 480	718 460							
TOTAL	4 153 232	4 360 894	4 600 743							

SCHEDULE 4

ALLOCATIONS TO MUNICIPALITIES TO SUPPLEMENT THE FUNDING OF FUNCTIONS FUNDED FROM MUNICIPAL BUDGETS

Vote	Name of allocation	Purpose	City	Column A	Column B	
				2011/12 Allocation	Forward Estimates	
					2012/13	2013/14
Human Settlements (Vote 31)	Urban Settlements Development Grant	To improve the efficiency and coordination of investments in the built environment by providing large municipalities with appropriate resources and control over the selection and pursuit of investment programmes in the built environment	Buffalo City	R'000	R'000	R'000
			City of Cape Town	423 446	497 908	547 338
			City of Johannesburg	824 030	972 615	1 067 485
			City of Tshwane	1 027 970	1 216 260	1 333 559
			Ekurhuleni	891 081	1 053 856	1 155 692
			eThekweni	1 094 276	1 297 640	1 421 452
			Mangaung	1 091 574	1 299 706	1 421 322
			Nelson Mandela Bay	411 995	483 427	531 884
			Nelson Mandela Bay	502 626	588 100	648 074
			TOTAL	6 266 998	7 409 512	8 126 806

Figure 4.11.3 Schedule 4: Allocations to provinces to supplement the funding programmes or functions funded from provincial budget.

SCHEDULE 5

SPECIFIC PURPOSE ALLOCATIONS TO PROVINCES

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B				
					2011/12 Allocation	Forward Estimates				
						2012/13	2013/14			
Agriculture, Forestry and Fisheries (Vote 26)	(a) Ilima/Letsema Projects Grant	To assist targeted vulnerable South African farming communities to increase agricultural production and improve farming skills	Conditional allocation	Eastern Cape	R'000	R'000	R'000			
				Free State	40 000	42 000	44 310			
				Gauteng	52 000	54 600	57 603			
				KwaZulu-Natal	20 000	21 000	22 155			
				Limpopo	60 000	63 000	66 465			
				Mpumalanga	40 000	42 000	44 310			
				Northern Cape	40 000	42 000	44 310			
				Northern Cape	60 000	63 000	66 465			
				North West	40 000	42 000	44 310			
				Western Cape	48 000	50 400	53 172			
				TOTAL	400 000	420 000	443 100			
				(b) Land Care Programme Grant: Poverty Relief and Infrastructure Development	To enhance the sustainable conservation of natural agriculture resources through a community-based participatory approach; create job opportunities through the Expanded Public Works programme; and to create an enabling environment for improved food security and poverty relief	Conditional allocation	Eastern Cape	9 244	16 823	15 866
							Free State	4 622	8 953	8 571
							Gauteng	4 044	6 246	6 163
KwaZulu-Natal	9 244	20 304	18 746							
Limpopo	8 667	20 356	19 562							
Mpumalanga	5 198	10 958	10 249							
Northern Cape	6 355	12 724	12 055							
North West	6 932	11 557	10 552							
Western Cape	3 466	7 740	7 233							
TOTAL	57 772	115 661	108 997							
Arts and Culture (Vote 14)	Community Library Services Grant	To transform urban and rural community library infrastructure, facilities and services (primarily targeting previously disadvantaged communities) through a recapitalised programme at provincial level in support of local government and national initiatives	Conditional allocation				Eastern Cape	80 974	79 273	75 633
							Free State	47 909	50 304	55 070
							Gauteng	54 716	57 452	60 611
							KwaZulu-Natal	45 401	48 619	56 297
				Limpopo	66 497	69 822	73 662			
				Mpumalanga	66 497	69 822	73 662			
				Northern Cape	69 900	73 395	77 430			
				North West	62 832	65 973	69 601			
				Western Cape	48 694	56 129	60 216			
				TOTAL	543 420	570 789	602 182			

SCHEDULE 5

SPECIFIC PURPOSE ALLOCATIONS TO PROVINCES

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B				
					2011/12 Allocation	Forward Estimates				
						2012/13	2013/14			
Basic Education (Vote 15)	(a) Dinaledi Schools Grant	To promote Mathematics and Physical Science teaching and learning; to improve learner performance in Mathematics and Physical Science in line with the Action Plan 2014; and to improve teachers content knowledge of Mathematics and Physical Science	Conditional allocation	Eastern Cape	R'000	R'000	R'000			
				Free State	8 400	12 000	12 660			
				Gauteng	5 040	7 200	7 596			
				KwaZulu-Natal	14 140	20 200	21 311			
				Limpopo	12 320	17 600	18 568			
				Limpopo	7 140	10 200	10 761			
				Mpumalanga	6 440	9 200	9 706			
				Northern Cape	2 380	3 400	3 587			
				North West	7 420	10 600	11 183			
				Western Cape	6 720	9 600	10 128			
				TOTAL	70 000	100 000	105 500			
				(b) HIV and Aids (Life Skills Education) Grant	To support South Africa's HIV prevention strategy by increasing sexual and reproductive knowledge, skills and appropriate decision making among learners and educators; to mitigate the impact of HIV by providing a caring, supportive and enabling environment for learners and educators; and to ensure the provision of a safe, rights-based environment in schools that is free of discrimination, stigma and any form of sexual harassment/abuse	Conditional allocation	Eastern Cape	34 346	35 322	37 265
							Free State	11 772	12 561	13 252
							Gauteng	28 175	29 217	30 824
KwaZulu-Natal	45 114	46 876	49 445							
Limpopo	28 088	30 012	31 663							
Mpumalanga	16 388	17 486	18 448							
Northern Cape	4 357	4 649	4 905							
North West	14 700	15 685	16 555							
Western Cape	16 388	17 486	18 448							
TOTAL	199 328	209 294	220 805							
(c) National School Nutrition Programme Grant	To provide nutritious meals to targeted learners	Conditional allocation	Eastern Cape				845 166	909 644	959 674	
			Free State				244 699	263 367	277 852	
			Gauteng				509 798	548 690	578 868	
			KwaZulu-Natal				1 070 013	1 151 644	1 214 985	
			Limpopo	829 669	892 964	942 077				
			Mpumalanga	440 923	474 560	500 661				
			Northern Cape	105 116	113 136	119 359				
			North West	305 935	329 301	347 412				
			Western Cape	227 433	244 784	258 247				
			TOTAL	4 578 752	4 928 090	5 199 135				

SCHEDULE 5

SPECIFIC PURPOSE ALLOCATIONS TO PROVINCES

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B	
					2011/12 Allocation	Forward Estimates	
						2012/13	2013/14
					R'000	R'000	R'000
Basic Education (Vote 15)	(d) Technical Secondary Schools Recapitalisation Grant	To recapitalise technical schools to improve the capacity to contribute to skills development and training	Conditional allocation	Eastern Cape	37 584	39 464	41 635
				Free State	14 428	15 150	15 983
				Gauteng	30 596	32 127	33 894
				KwaZulu-Natal	38 563	40 490	42 717
				Limpopo	27 450	28 822	30 407
				Mpumalanga	18 078	18 983	20 027
				Northern Cape	7 667	8 052	8 495
				North West	17 015	17 867	18 850
				Western Cape	8 619	9 045	9 542
				TOTAL	200 000	210 000	221 550
				Health (Vote 16)	(a) Comprehensive HIV and Aids Grant	To enable the health sector to develop an effective response to HIV and Aids including universal access to HIV counselling and testing; to support the implementation of the National Operational Plan for comprehensive HIV and Aids treatment and care; and to subsidise in-part funding for antiretroviral treatment programme	Conditional allocation
Free State	530 440	621 824	750 788				
Gauteng	1 620 673	1 934 057	2 294 326				
KwaZulu-Natal	1 889 427	2 246 099	2 675 081				
Limpopo	624 909	733 963	884 146				
Mpumalanga	490 366	578 087	694 264				
Northern Cape	212 923	247 228	301 557				
North West	599 437	705 969	848 533				
Western Cape	660 614	743 249	935 489				
TOTAL	7 492 962	8 824 610	10 606 664				
(b) Forensic Pathology Services Grant	To continue the development and provision of adequate forensic pathology services in all provinces	Conditional allocation	Eastern Cape		73 506	-	-
			Free State		39 451	-	-
			Gauteng		97 966	-	-
			KwaZulu-Natal	161 550	-	-	
Limpopo	42 308	-	-				
Mpumalanga	53 114	-	-				
Northern Cape	24 240	-	-				
North West	28 019	-	-				
Western Cape	70 226	-	-				
TOTAL	590 380	-	-				

SCHEDULE 5

SPECIFIC PURPOSE ALLOCATIONS TO PROVINCES

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B	
					2011/12 Allocation	Forward Estimates	
						2012/13	2013/14
					R'000	R'000	R'000
Health (Vote 16)	(c) Hospital Revitalisation Grant	To provide funding to enable provinces to plan, manage, modernise, rationalise and transform health infrastructure, health technology, monitoring and evaluation of the health facilities in line with national policy objectives	Conditional allocation	Eastern Cape	382 048	402 678	387 104
				Free State	417 883	438 140	412 172
				Gauteng	801 965	828 552	760 206
				KwaZulu-Natal	547 698	566 605	533 432
				Limpopo	371 672	392 410	369 152
				Mpumalanga	356 557	378 014	355 081
				Northern Cape	406 892	427 263	401 940
				North West	370 074	401 150	377 375
				Western Cape	481 501	501 096	471 397
				TOTAL	4 136 290	4 335 908	4 067 859
				Human Settlements (Vote 31)	Human Settlements Development Grant	To provide funding for the creation of sustainable human settlements	Conditional allocation
Free State	913 907	954 326	1 006 814				
Gauteng	3 804 611	3 970 951	4 186 987				
KwaZulu-Natal	2 769 871	2 891 813	3 050 176				
Limpopo	1 398 914	1 459 839	1 539 788				
Mpumalanga	916 677	957 218	1 009 865				
Northern Cape	322 639	336 906	355 437				
North West	998 376	1 042 529	1 099 868				
Western Cape	1 638 845	1 711 035	1 804 785				
TOTAL	14 941 516	15 599 437	16 457 408				
Public Works (Vote 7)	(a) Devolution of Property Rate Funds Grant	To facilitate the transfer of property rates expenditure responsibility to provinces	Conditional allocation	Eastern Cape	192 709	202 854	214 360
				Free State	219 916	233 737	249 390
				Gauteng	270 775	284 314	299 951
				KwaZulu-Natal	518 585	556 669	599 319
				Limpopo	34 054	35 757	37 725
				Mpumalanga	73 964	77 647	84 601
				Northern Cape	41 754	44 355	47 303
				North West	160 192	179 984	206 241
				Western Cape	291 281	322 730	351 963
				TOTAL	1 803 230	1 938 047	2 090 853

SCHEDULE 5

SPECIFIC PURPOSE ALLOCATIONS TO PROVINCES

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B	
					2011/12 Allocation	Forward Estimates	
						2012/13	2013/14
					R'000	R'000	R'000
Public Works (Vote 7)	(b) Social Sector Expanded Public Works Programme Incentive Grant for Provinces	To incentivise provincial social sector departments identified in the 2011 Social Sector EPWP Log-frame to increase job creation by focusing on the strengthening and expansion of social service programmes that have employment potential	Conditional allocation	Eastern Cape	5 070	7 120	9 139
				Free State	15 586	18 703	22 444
				Gauteng	34 848	41 818	50 181
				KwaZulu-Natal	30 269	32 485	34 354
				Limpopo	28 332	33 998	40 798
				Mpumalanga	13 407	16 088	19 306
				Northern Cape	13 890	16 669	20 002
				North West	42 222	54 229	65 901
				Western Cape	16 734	20 394	23 903
				TOTAL	200 358	241 504	286 028
				Sport and Recreation South Africa (Vote 20)	Mass Sport and Recreation Participation Programme Grant	To facilitate mass participation within communities and schools through selected activities, empowerment of communities and schools in conjunction with relevant stakeholders	Conditional allocation
Free State	33 078	34 732	36 642				
Gauteng	71 148	74 705	78 814				
KwaZulu-Natal	87 694	92 078	97 142				
Limpopo	53 636	56 318	59 415				
Mpumalanga	38 382	40 301	42 518				
Northern Cape	26 372	27 691	29 214				
North West	35 124	36 880	38 909				
Western Cape	42 964	45 112	47 593				
TOTAL	451 968	474 566	500 667				
Transport (Vote 37)	Gautrain Rapid Rail Link	To provide for national government funding contribution to the Gauteng Provincial Government for the construction of a fully integrated Gautrain Rapid Rail network	Conditional allocation				
				Free State	-	-	-
				Gauteng	5 300	-	-
				KwaZulu-Natal	-	-	-
				Limpopo	-	-	-
				Mpumalanga	-	-	-
				Northern Cape	-	-	-
				North West	-	-	-
				Western Cape	-	-	-
				TOTAL	5 300	-	-

Figure 4.11.4 Schedule 5: Specific purpose allocations to provinces.

SCHEDULE 6

SPECIFIC PURPOSE ALLOCATIONS TO MUNICIPALITIES

Vote	Name of allocation	Purpose	Column A	Column B	
			2011/12 Allocation	Forward Estimates	
				2012/13	2013/14
			R'000	R'000	R'000
RECURRENT GRANTS					
Cooperative Governance and Traditional Affairs (Vote 3)	Municipal Systems Improvement Grant	To assist municipalities in building in-house capacity to perform their functions and stabilise institutional and governance systems as required in the Municipal Systems Act and related legislation, policies and local government turnaround strategy	219 420	230 096	242 734
National Treasury (Vote 10)	Local Government Financial Management Grant	To promote and support reforms in financial management by building capacity in municipalities to implement the Municipal Finance Management Act (MFMA) As part of strengthening financial and asset management in municipalities, the grant provides funding for water and energy internship programme to graduates in selected water boards and municipalities	434 641	479 333	526 086
Water Affairs (Vote 38)	Water Services Operating Subsidy Grant	To subsidise and build capacity in water schemes owned and/or operated by the Department of Water Affairs or by other agencies on behalf of the department and transfer these schemes to local government	560 794	399 000	420 945
TOTAL			1 214 855	1 108 429	1 189 765
INFRASTRUCTURE GRANTS					
Cooperative Governance and Traditional Affairs (Vote 3)	Municipal Infrastructure Grant	To provide specific capital finance for basic municipal infrastructure backlogs for poor households, micro enterprises and social institutions servicing poor communities	11 443 505	13 914 132	14 679 408
Energy (Vote 29)	(a) Integrated National Electrification Programme (Municipal) Grant	To implement the Integrated National Electrification Programme (INEP) by providing capital subsidies to municipalities to address the electrification backlog of occupied residential dwellings, the installation of bulk infrastructure and rehabilitation and refurbishment of electricity infrastructure in order to improve quality of supply	1 096 612	1 151 443	1 214 772
	(b) Electricity Demand Side Management (Municipal) Grant	To implement the Electricity Demand Side Management (EDSM) programme by providing subsidies to licenced distributors to address EDSM in residential dwellings, communities and municipal infrastructure in order to mitigate the risk of load shedding and supply interruptions	280 000	-	-
National Treasury (Vote 10)	Neighbourhood Development Partnership Grant	To support neighbourhood development projects that provide community infrastructure and create the platform for other public and private sector development, towards improving the quality of life of residents in targeted underserved neighbourhoods (townships generally)	750 000	800 000	800 000
Transport (Vote 37)	(a) Public Transport Infrastructure and Systems Grant	To provide for accelerated planning, construction and improvement of public and non-motorised transport networks	4 803 347	4 999 781	5 563 604
	(b) Rural Transport Services and Infrastructure Grant	To assist rural district municipalities to set up rural road asset management systems, and collect road and traffic data in line with the Road Infrastructure Strategic Framework for South Africa	35 439	37 382	39 250
Water Affairs (Vote 38)	Municipal Drought Relief Grant	To provide capital finance for construction of appropriate water infrastructure to alleviate further impacts of drought in Nelson Mandela Bay metropolitan municipality for affected households, micro enterprises and social institutions	450 000	-	-
TOTAL			18 858 903	20 902 738	22 297 035

Figure 4.11.5 Schedule 6: Specific purpose allocations to municipalities.

SCHEDULE 7

ALLOCATIONS-IN-KIND TO PROVINCES FOR DESIGNATED SPECIAL PROGRAMMES

Vote	Name of allocation	Purpose	Province	Column A	Column B	
				2011/12 Allocation	Forward Estimates	
					2012/13	2013/14
				R'000	R'000	R'000
Basic Education (Vote 15)	School Infrastructure Backlogs Grant	Eradication of inappropriate school infrastructure; and provision of water, sanitation and electricity to schools	Eastern Cape	-	-	-
			Free State	-	-	-
			Gauteng	-	-	-
			KwaZulu-Natal	-	-	-
			Limpopo	-	-	-
			Mpumalanga	-	-	-
			Northern Cape	-	-	-
			North West	-	-	-
			Western Cape	-	-	-
			Unallocated	700 000	2 315 000	5 189 000
	TOTAL		700 000	2 315 000	5 189 000	

SCHEDULE 7

ALLOCATIONS-IN-KIND TO MUNICIPALITIES FOR DESIGNATED SPECIAL PROGRAMMES

Vote	Name of allocation	Purpose	Column A	Column B	
			2011/12 Allocation	Forward Estimates	
				2012/13	2013/14
			R'000	R'000	R'000
National Treasury (Vote 10)	Neighbourhood Development Partnership Grant	To support neighbourhood development projects that provide community infrastructure and create the platform for other public and private sector development, towards improving the quality of life of residents in targeted underserved neighbourhoods (townships generally)	100 000	80 000	55 000
Energy (Vote 29)	(a) Integrated National Electrification Programme (Eskom) Grant	To implement the Integrated National Electrification Programme (INEP) by providing capital subsidies to Eskom to address the electrification backlog of occupied residential dwellings, the installation of bulk infrastructure and rehabilitation and refurbishment of electricity infrastructure in order to improve quality of supply	1 737 812	1 882 057	1 985 570
	(b) Electricity Demand Side Management (Eskom) Grant	To implement the Electricity Demand Side Management (EDSM) programme by providing subsidies to Eskom to address EDSM in residential dwellings and communities in order to mitigate the risk of load shedding and supply interruptions	118 800	-	-
Water Affairs (Vote 38)	(a) Water Services Operating Subsidy Grant	To subsidise and build capacity in water schemes owned and/or operated by the Department of Water Affairs or by other agencies on behalf of the department and transfer these schemes to local government	99 935	-	-
	(b) Regional Bulk Infrastructure Grant	To develop regional bulk infrastructure for water supply to supplement water treatment works at resource development and link such water resource development with the local bulk and local distribution networks on a regional basis cutting across several local municipal boundaries. In the case of sanitation, to supplement regional bulk collection as well as regional waste water treatment works	1 704 140	2 003 217	2 176 274
Human Settlements (Vote 31)	Rural Households Infrastructure Grant	To provide specific capital funding for the eradication of rural water and sanitation backlogs and is targeted at existing households where bulk-dependent services are not viable. The grant also funds training for beneficiaries on health and hygiene practices and how to maintain the facilities provided	231 500	479 500	517 250
		TOTAL	3 992 187	4 444 774	4 734 094

Figure 4.11.6 Schedule 7: Specific allocations-in-kind to provinces and municipalities for designated special programmes.

SCHEDULE 8

INCENTIVES TO PROVINCES TO MEET TARGETS WITH REGARDS TO PRIORITY GOVERNMENT PROGRAMMES

Vote	Name of allocation	Purpose	Type of allocation	Province	Column A	Column B	
					2011/12 Allocation	Forward Estimates	
						2012/13	2013/14
					R'000	R'000	
Public Works (Vote 7)	Expanded Public Works Programme Incentive Grant for Provinces	To incentivise provincial departments to increase job creation efforts in infrastructure, environment and culture programmes through the use of labour-intensive methods and the expansion of job creation in line with the Expanded Public Works Programme (EPWP) guidelines	Incentive allocation to provinces	Eastern Cape	30 431	-	-
				Free State	10 606	-	-
				Gauteng	44 210	-	-
				KwaZulu-Natal	129 836	-	-
				Limpopo	9 545	-	-
				Mpumalanga	9 486	-	-
				Northern Cape	4 810	-	-
				North West	5 758	-	-
				Western Cape	22 587	-	-
				Unallocated	-	325 220	401 588
	TOTAL		267 269	325 220	401 588		

INCENTIVES TO MUNICIPALITIES TO MEET TARGETS WITH REGARDS TO PRIORITY GOVERNMENT PROGRAMMES

Vote	Name of allocation	Purpose	Column A	Column B	
			2011/12 Allocation	Forward Estimates	
				2012/13	2013/14
			R'000	R'000	R'000
Public Works (Vote 7)	Expanded Public Works Programme Incentive Grant for Municipalities	To incentivise municipalities to increase job creation efforts in infrastructure, environment and culture programmes through the use of labour-intensive methods and the expansion of job creation in line with the Expanded Public Works Programme (EPWP) guidelines	679 583	665 678	779 496
		TOTAL	679 583	665 678	779 496

Figure 4.11.7 Schedule 8: Specific incentives to municipalities to meet targets with regard to priority government programmes.

SCHEDULE 9

UNALLOCATED PROVISIONS FOR PROVINCES FOR DISASTER RESPONSE

Vote	Name of allocation	Purpose	Province	Column A	Column B	
				2011/12 Allocation	Forward Estimates	
					2012/13	2013/14
				R'000	R'000	R'000
Cooperative Governance and Traditional Affairs (Vote 3)	Provincial Disaster Grant	To provide for the immediate release of funds for disaster response	Eastern Cape	-	-	-
			Free State	-	-	-
			Gauteng	-	-	-
			KwaZulu-Natal	-	-	-
			Limpopo	-	-	-
			Mpumalanga	-	-	-
			Northern Cape	-	-	-
			North West	-	-	-
			Western Cape	-	-	-
			Unallocated	305 000	180 000	190 000
			TOTAL	305 000	180 000	190 000

UNALLOCATED PROVISIONS FOR MUNICIPALITIES FOR DISASTER RESPONSE

Vote	Name of allocation	Purpose	Column A	Column B	
			2011/12 Allocation	Forward Estimates	
				2012/13	2013/14
			R'000	R'000	R'000
Cooperative Governance and Traditional Affairs (Vote 3)	Municipal Disaster Grant	To provide for the immediate release of funds for disaster response	470 000	330 000	350 000
			TOTAL	470 000	330 000

Figure 4.11.8 Schedule 9: Specific funds that are not currently allocated to specific municipalities or provinces for disaster response.

It is important to note, that the funding available to the Department of Water Affairs or municipalities in terms of water service provision, relate specifically and only to infrastructure development, and not to addressing human capital shortfalls or water conservation and demand management implementation. However, there are funds readily available for disaster response.

Schedule 4 and 6 allocations could be provided for the implementation of WCDM measures, whereas Schedule 6 allocations could be used to address the human resource capacity challenges at municipalities, e.g. training of process controllers for WWTWs.

4.11.3.1.2 Municipal Infrastructure Grant (MIG)

The Municipal Infrastructure Grant is directed towards providing basic infrastructure to supply services to the poor. Ideally this provision should be achieved at the lowest possible cost while still ensuring that the adequate level of service has been met. The Department of Provincial and Local Government has set out the following conditions for the MIG programme in the National MIG Management Unit Programme Management Processes and Procedures Document.

- **Conformity with IDPs:** No MIG funds may be spent outside the framework of a municipality's pre-existing Integrated Development Plan and its approved budget. The IDPs should be based on the provision of a basic package of services to the poor, appropriate services levels, financial sustainability and the existence of adequate organisational capacity.
- **Limitation on operational spending:** The MIG grant can only be used for capital investment and cannot be used to finance operating expenditure other than the prescribed percentage permitted for the operation of a project management unit in applicable municipalities.
- **Restrictions on eligibility:** Spending of MIG funds is restricted to those categories of infrastructure, beneficiaries and levels of service identified in Section 5 of the MIG Policy. To ensure that eligibility requirements are met, a cap on capital spending per household will be set and specific requirements may be set for the amount of spending on particular types of infrastructure.
- **Adequate attention to rehabilitation:** The municipality must invest an appropriate proportion of the funds on rehabilitating existing infrastructure.
- **Pledging of funds to secure loan finance:** No 'pledging' (the assigning of capital grant funds to be used to pay off a loan to a particular lending organisation) may be undertaken with MIG funds.
- **Achievement of specified basic service coverage targets:** The attainment of pre-agreed basic service coverage targets in specific sectors (water and sanitation, for example) to be achieved by a particular municipality over a three-year period, based on their current position.
- **Poverty alleviation:** It is important for the economic spin-offs of infrastructure delivery to be maximised. This relates primarily to temporary and permanent job creation arising from municipal infrastructure investments. This condition will be associated with national government's 'Expanded Public Works Programme' (EPWP). The gender provisions of this programme must be adhered to.
- **Reporting:** The recipient municipality has prepared and submitted all monthly reports on grant utilisation in a prescribed format by a specified time.
- **MIG funds to be allocated in municipal budget:** All MIG funds to be spent in any year must be allocated to specific projects, which must be identified in municipal budgets.

- Registration of MIG projects (otherwise referred to as project feasibility study):**
 All projects to be funded with MIG funds, wholly or partially, must have a project registration form which conforms with requirements to be established for the MIG programme and which must be registered on the national MIG database before the award of contracts for construction commences.

4.11.3.1.3 Regional Bulk Infrastructure Grant (RBIG)

The Regional Bulk Infrastructure Grant is managed by the Department of Water Affairs, and according to the Minister of the time. RBIG is aimed at indirectly providing support to the WSA. The grant is not intended to provide free water and sanitation services but rather, it is aimed at “the financing for the development of regional bulk water infrastructure and regional bulk sanitation collection as well as regional water and waste water treatment works”

The objectives of RBIG Programme are to:

1. Identify all regional bulk project requirements, through appropriate planning processes.
2. Assist with the implementation of infrastructure projects.
3. Ensure that existing regional bulk infrastructure is properly operated and maintained.
4. Facilitate the development of institutional arrangements and capacity.

The overall RBIG programme is illustrated schematically in **Figure 4.11.9**. (Source: Regional Bulk Infrastructure Grant (RBIG) programme Bulk Infrastructure Meeting Western Cape).

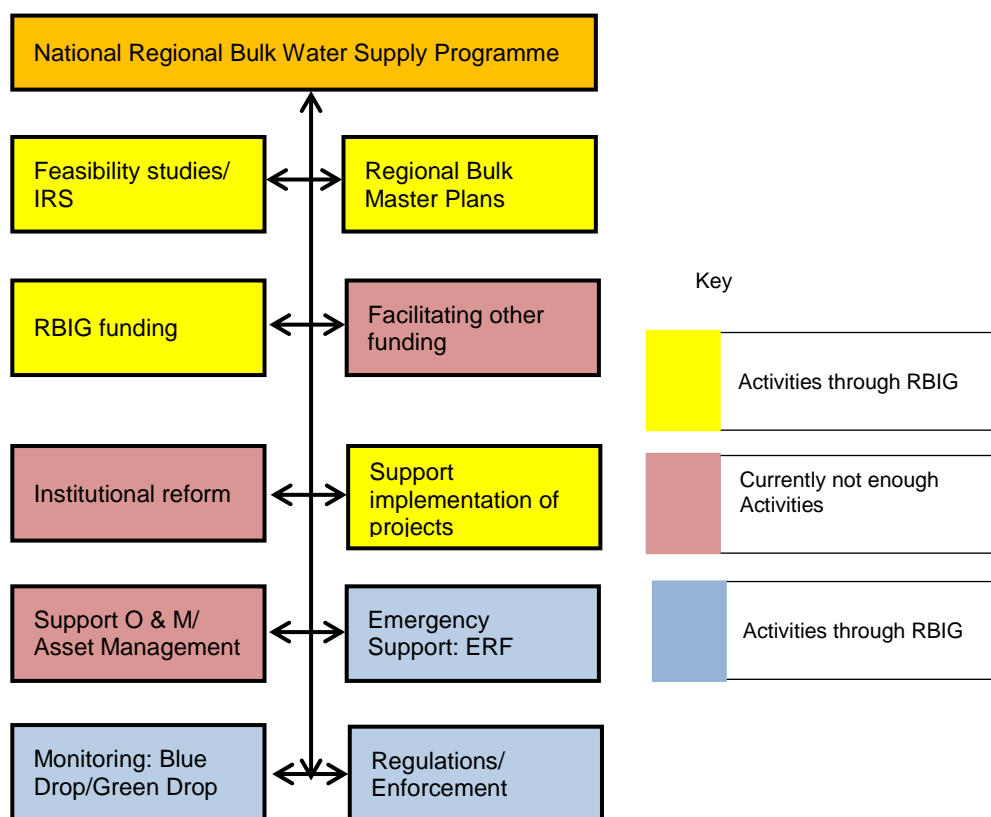


Figure 4.11.9 The RBIG Programme.

Currently, RBIG’s focus with regards to wastewater infrastructure is very limited. It is proposed however that the funding which is directed to improving wastewater works will be increased significantly. This fund thus allows municipalities to receive funding in order to improve water and sanitation facilities. RBIG focuses on providing infrastructure on a macro scale, meaning infrastructure across multi municipalities or, on a sub-regional scale, meaning within a specific municipality but

serving many communities over a distance of greater than 5km. RBIG provides a list of criteria which is shown in the **Table 4.11.1**.

Table 4.11.1 RBIG Application criteria

Regional-Serving more than one municipality
Sub-regional-infrastructure serving numerous communities over distances greater than 5km
Bulk water supply scheme designed for 5Ml/day or more
WWTW discharging into fresh water resources
Water treatment plant designed for 2Ml/day or more

Table 4.11.2 outlines the DoRA and DWA conditions attached to the funding process. The DWA sets out conditions which need to be met in order for funding to be possible. All submissions must include a water demand analysis, identify the efficiency of water used, must include proof that an attempt to reduce water losses was made, contain a guideline of the asset management plans and ensure that as far as possible these plans are sustainable. Lastly, the amount of involvement of SMME and BEE enterprises must be specified. (Source: Presentation Cape Town BITT RBIG meeting)

Table 4.11.2 DoRA and DWA conditions for the RBIG funding process

DoRA Conditions of Funding	
	Conditions
Planning	<ul style="list-style-type: none"> • Need for bulk solution confirmed and accepted • Aligned with and referenced to IDP & WSDP • Included in Regional Bulk Master Plan
Funding	<ul style="list-style-type: none"> • Social component – a clear perspective on the user profile must be provided (social and economic) • No duplication of funding will be allowed (e.g. with MIG)
Implementation ready	<ul style="list-style-type: none"> • All preparatory work must be completed and approved • Financing plan with associated/co-funding options and agreements must be in place • Ownership and commitment for sustainable management must be proven
DWA funding conditions	
Demand analysis	All projects reports must include an adequate water demand analysis.
Water use efficiency	All projects reports must determine the current level of water use efficiency analysing the non-revenue water and determining the level of water use efficiency of different categories of consumers.
Compliance to water conservation measures	All projects must prove that water loss reduction and water demand management options have been implemented satisfactorily to warrant further water supply augmentation.
Acceptable asset management plans and systems	All projects must demonstrate adequate steps to ensure long-term sustainable operation and maintenance of the infrastructure assets (including asset management plans and systems).
Local Economic Development	All proposed projects must identify and specify the amount of anticipated involvement and benefit of SMMEs and BEE enterprises

Currently the RBIG funding does not make provision for implementation of WCDM measures. However, a proposal has been put to Treasury to fund such WCDM projects, which will reduce the demand for new resource development and associated infrastructure. This is particularly relevant considering the significant opportunities that have been identified but for which implementation is lagging. If the proposal is approved by Treasury, then the first phase of funding will be R300 million. Municipalities will then have to prove implementation of WCDM measures prior to applying for grants for new resource development.

4.11.3.1.4 Capacity Building Grant

The Capacity Building Grant from DPLG provides funding support for municipalities to address their institutional and planning capacity. Municipalities can submit a Capacity Building Business Plan to DPLG to receive capacity building funding support.

4.11.3.2 Training and Research

4.11.3.2.1 Water Research Commission

South Africa has a fairly strong research and training infrastructure in the water sector. The Water Research Commission (WRC) supports water research and development as well as the building of sustainable water research capacity in South Africa. It serves as the country's water-centred knowledge 'hub' leading the creation, dissemination and application of water-centred knowledge, focusing on water resource management, water-linked ecosystems, water use and waste management and water utilisation in agriculture.

4.11.3.2.2 FETWater.

FETWater is focused on identifying the areas in which training with regards to water is regarded as priority. FETWater provides funding to various municipalities and the main criterion to receive funding is that the proposal to receive funding needs to come from a recognized network (theme of research, e.g. estuary management, fish management, drafting CMSs, etc.). The networks allow development to occur in a more sustainable manner while at the same time, ensuring greater impact. In addition, FETWater will only support certain activities which form a priority list. A detailed list of activities which FETWater will approve is given in the document "The Framework Programme for Research Education and Training in Water (FETWater): A Guideline".

4.11.3.2.3 Water Institute of South Africa (WISA)

The Water Institute of Southern Africa (WISA), a professional association, keeps its members abreast of the latest developments in water technology and research through its national and international liaison, links and affiliation.

4.11.3.3 Donor Funding

Various municipalities within the Western Cape will be required to upgrade or improve certain infrastructure or operations. However, some municipalities may not have the ability to do so as their budgets would have already been utilized in full for the financial year. In such cases, the municipality in question may apply for funding from external sources. There are various funding mechanisms for the different sectors and they will be outlined here.

The NSDP suggests that a distinction be made between fixed and social investment. Fixed investment should primarily be focused on settlements which have the potential to undergo sustainable economic growth. Social investment is more focused on community development and the settlements generally have a low potential for growth. By identifying which settlements fall into which category, the funds could possibly be more successfully targeted. Human need is also considered when evaluating which settlements are a priority. **Table 4.11.3** provides a description of donors available for funding as well

as which sector they provide funding to. The table has been compiled from the Database⁸ of Potential Funders for Municipalities.

4.11.3.3.1 Development Bank of Southern Africa (DBSA)

The Development Bank of Southern Africa is an important player in the water and sanitation sector, both as a financier and as an advisor and project promoter. In 2005-2006 about 29% of its approved projects were for water supply (R1 881 million) and sanitation (R165 million). Other financing institutions in the sector include the Infrastructure Finance Corporation Limited, which claims to be the only 100% privately owned infrastructure debt fund in the world.

4.11.3.3.2 Mvula Trust

The Mvula trust has disbursed over R300 million to water services programmes and projects and has provided services to over a million South Africans who previously did not have access to either water or sanitation services. It is specialized in implementing and supporting the delivery of water services in rural and peri-urban areas through community management, the establishment of community based water services providers and supporting local authorities to create an enabling environment for sustainability.

4.11.3.3.3 African Development Bank (AfDB)

The AfDB has placed high priority on the water sector as a way of assisting Regional Member Countries (RMCs) to achieve the objectives of poverty reduction and economic growth because of the unique potential of this sector to contribute to achieving the other Millennium Development Goals of poverty, health, education, and gender. The Bank's portfolio of interventions in the water and sanitation sector spans drinking water supply, water resources management, sanitation and hygiene, capacity building and policy reform among others. The Bank is currently financing more than 50 active projects in 29 countries amounting to about USD 2 billion.

The AfDB aims at significantly increasing its interventions in rural water supply and sanitation while continuing to support urban and peri-urban water supply and sanitation and promoting integrated management of water resources. In summary, the AfDB's strategy seeks to:

- Increase water supply and sanitation financing
- Focus primarily on the poorest 65% of population living in rural areas
- Provide some support for peri-urban areas, small and medium towns; and specifically for urban sanitation
- Promote transboundary water resources management
- Support the enabling environment to attract more resources

Moreover, the AfDB is also hosting a number of complementary initiatives which together enhance the effectiveness of the Bank's work and provide vital resources for scaling up and for promoting innovation and supporting knowledge management activities. <http://www.afdb.org/en/topics-and-sectors/sectors/water-supply-sanitation/>

4.11.3.3.4 European Water Initiative (EUWI)

To assist the EUWI in achieving its aims, the European Union launched the ACP-EU Water Facility in 2004. 500 million euro was allocated to provide water and sanitation for African, Caribbean and Pacific (ACP) countries. In 2010, an allocation of 200 million euro was allocated to the new water facility to help achieve the aims of the Millennium Development Goals with respect to water and sanitation. The ACP-EU water facility calls for proposals from municipalities, local governments and other organisations and co-funds some of these proposals to ensure that the provision of water and

⁸ The database has been compiled from a number of sources including the MXA website (www.mxa.co.za), and the IDP Nerve Centre (www.idp.org.za).

sanitation in that region is adequate. Future funding for South Africa is available from the ACP-EU upon application and acceptance of the proposal given. <http://www.euwi.net/policy>
http://ec.europa.eu/europeaid/where/acp/regional-cooperation/water/index_en.htm

4.11.3.4 Existing Projects

4.11.3.4.1 Masibambane

Masibambane is an existing project which is led by the Department of Water Affairs. The programme receives funding from the European Union (EU) as well as the Swiss Government and Ireland Aid. Currently, Masibambane is in its third phase which was launched in 2007. This phase is focused on water provision while maintaining growth and development. This means that “the provision of water services must meet economic and social priorities.” <http://www.dwa.gov.za/masibambane>

Table 4.11.3 Donors available for funding and their selected sectors.

Name of Organization	Water & Sanitation	Rural Development	Urban Renewal	Western Cape	Conditions
AUSAID	yes	no	no	yes	none
Belgian Embassy	no	yes	no	yes	focused on HIV/AIDS
CIDA	yes	yes	no	yes	none
DFID	yes	no	no	yes	<p>The projects implemented in municipalities are directly linked to the implementation of the IDP through technical support and project funding. The funding allocation process can be described as follows:</p> <p>Prior to the commencement of a funding tranche, a consultation process is followed to agree a strategy for donor aid. The UK Secretary of State will then approve the strategy paper. The paper identifies priority sectors and each sector will be consulted in relation to the priorities identified. In the case of local government, DPLG was consulted. The priorities are valid for a three year period. DPLG will then develop a Logframe for local government, which is in line with the country's strategic objectives and the overall Logframe, which was approved for the sector concerned. Each municipality may develop its own priorities and draft a Logframe, according to its needs and priorities, provided it supports the main sectoral Logframe.</p> <p>DFID does not communicate its funding capacity to municipalities. DPLG identifies the recipient municipalities, based on poverty indicators. Funding will reach municipalities via DPLG. Municipalities must be able to integrate the priorities of the project into their general Council Strategic plan.</p> <p>A donor recipient must prepare its project plan in the DFID logframe approach in order to be considered for funding. On request from a municipality, assistance is provided in the form of consultants who prepare the Logframes for municipalities, on condition that skills must be transferred to the municipality. Various workshops are also being held to capacitate municipalities. In order to ensure the necessary technical assistance and financial project management, DFID would appoint a procurement service provider at the request of a municipality. DFID would make the technical assistance available to the municipalities to enable them to acquire in-house capacity. Funding tranches are usually awarded for 3 - 5 years.</p> <p>DFID's major skills requirement from municipalities is the ability to project manage a donor funded project. In this regard, municipalities need the following competencies:</p> <ul style="list-style-type: none"> • Ability to understand, develop and apply the Logical Framework Approach terminology and objectives. • Ability to report to the Donor Institution in terms of the LFA requirements. • Understand procurement management and be able to ensure procedurally correct procurement process management. • Financial management and budgeting <p>Average length of time for an application for funding to be processed could be a matter of weeks, after the municipality has been identified by DPLG and the municipal Logframe has been approved. Funds are transferred electronically from the DPLG into the municipality's account. DFID does not micro-manage, but ensures the overall strategic compliance with the priorities and objectives of the Logframe. The success of projects is measured in relation to meeting the objectives and deliverables outlined in the logframe, which are viewed as the only criteria for success of the project. Municipalities have to report on a quarterly basis on progress made. DPLG sets criteria in relation to other outputs. DPLG and Logosul have to report on their funding allocations in the same manner.</p> <p>Municipalities' own contributions to the project are evaluated in terms of their commitment to utilise their own resources or secure additional resources to support project objectives.</p>
DCI	yes	no	no	no-Limpopo only	none
EU	yes	no	no	no	none
JICA	yes	yes	no	yes	none
New Zealand High com	no	yes	no	no	none
Royal Norwegian emb	yes	yes	no	yes	<p>The Norwegian/South African development cooperation will have clear objectives and targets, and be monitored regularly. Specific agreements will serve as instruments for dialogue, performance measurements and control. The period reflected in these guidelines, 2005-2009, will be used for the parties to jointly explore and lay the foundation for a more sustainable relationship beyond 2009.</p>
SIDA	no	no	yes	no	none
UNEP/ROA	yes	no	no	yes	none
USAID	no	no	yes	yes	none
World Bank	yes	no	no	yes	none
IDT	yes	yes	no	no	none
Kagiso trust	no	yes	no	yes	none
Mvula trust	yes	no	no	no	none
NDA	no	yes	yes	no	none
SANGOCO	no	yes	yes	yes	none
USN	no	no	yes	yes	none
Accenture	no	yes	no	yes	none
African life insurance	no	yes	no	----	----
Alexander Forbes	no	yes	no	yes	none
Anglo America chairman's fund	no	yes	no	yes	none
Anglo American platinum	no	yes	no	no	none
Anglo veal industries	no	yes	no	yes	none
Billiton development	no	yes	no	no	none

Name of Organization	Water & Sanitation	Rural Development	Urban Renewal	Western Cape	Conditions
trust					
BKS	no	yes	no	yes	none
Cadiz					
Investment Bank	no	yes	no	yes	none
Canon SA	no	yes	no	yes	none
Cargo Carriers	no	yes	no	yes	none
Clicks group	no	yes	no	yes	none
Corpcapital bank	no	yes	no	----	----
De Beers	no	yes	no	yes	none
DBSA	yes	yes	yes	yes	none
Digital planet	no	yes	no	yes	none
Dimension Data					
network service	no	yes	no	yes	none
Gallo Africa	no	yes	no	yes	none
Glenrand MIB					
Ltd	no	yes	no	yes	none
Goldfields	no	yes	no	no	none
Grant Thornton	no	yes	no	yes	none
Gypsum					
industries	no	yes	no	yes	none
Hollard					
insurance	no	yes	no	yes	none
Howden	no	yes	no	yes	none
Hullett Hydro	no	yes	no	yes	none
IBM SA	no	yes	no	yes	none
Janssen Cilag	no	yes	no	yes	none
Johnnic					
Communications	no	yes	no	no	none
Johnnic limited	no	yes	no	yes	none
KPMG services	no	yes	no	yes	none
Lewis stores	no	yes	no	yes	none
Masonite	yes	yes	no	yes	none
Mondi ltd	no	yes	no	yes	none
Nedcor	no	yes	no	yes	none
Nestle SA	yes	yes	no	no	none
Old Mutual	no	yes	no	yes	none
Pick n Pay					
foundation	no	yes	no	yes	none
PPC cement	no	yes	no	yes	none
PwC	no	yes	no	yes	none
Richards bay					
minerals	yes	yes	no	no	none
SA sugar					
association	no	yes	no	yes	none
Samancor					
foundation	no	yes	no	yes	none
Sasol ltd	no	yes	no	yes	none
shell SA	no	yes	no	yes	none
Standard Bank					
foundation	no	yes	no	yes	none
Tongaat Hulett					
Group	no	yes	no	no	none
Unifoods-					
unilever	no	yes	no	yes	none
WK Kellogg					
foundation	no	yes	no	yes	none

4.11.4 Problem Analysis

1. There is no direct funding available for the implementation of WCDM measures.
2. There is limited funding available for competency training needed for WWTWs operators, supervisors and process controllers.
3. Majority of the funding available is for “hard” engineering and infrastructure construction projects.

4.12 PROBLEM SYNTHESIS

4.12.1 Regulation and Enforcement

Limited ability to enforce laws and regulations, mainly due to:

- Inadequate capacity and inadequate technical competency;
- Poor monitoring and follow-up;
- Impractical permit conditions to monitor;
- Poor political and institutional will;
- Criminal liability of the state and cooperative governance
- Protracted legal processes

4.12.2 Inadequate capacity and technical competency

Inadequate capacity and competency, mainly due to:

- Lack of continuity of leadership – shifts in senior management and limited terms of office of managers impact negatively on decision-making; many people acting in positions do not want to make decisions;
- Occupation Specific Dispensation (OSD) – which is limiting the suitability of candidates applying for vacant posts, thereby slowing the recruiting process;
- Professional registration – OSD requires staff to be registered within their professions, however there is a backlog of up to 3 years at some professional registration organisations;
- Lack of technical capacity– the actual training required to address technical competency is not readily available, e.g. NQF and NTC compliant courses are not available at technikons;
- Limits to career growth within Government Departments due to political weighting over technical experience for senior positions. This has caused frustration and was a contributing factor to SA’s brain drain.

The results of inadequate capacity and technical competency include:

- Record of Decisions are delayed
- Water licences delayed
- Results in project delays
- Delays in approvals could result in loss of capital contributions by private sector with much shorter budget horizons than government.
- **Too** many issues (climate change, WWTW, WC/DM, AMD, etc.) requiring too many implementing tools at a time, adding to the complexities, i.e. limited available resources spread very thin.
- Lack of high level prioritisation or delegation of responsibility to solve a problem.