TOWARDS THE REGULATION OF THE COMPETENCES OF SOUTH AFRICA'S WATER SERVICES MANAGERS

Report to the
Water Research Commission

by

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Executive Summary

Introduction

The efficient, effective and sustainable provision of water supply and sanitation services, essential to public health and social well-being, economic activity and environmental sustainability, requires managers and staff with appropriate competences. South Africa faces a challenge in producing and deploying such competences. This study reviews the challenges and considers measures that could be taken to address them.

Goals of the Study

The study builds on previous WRC supported work with the specific goals of:-
- developing a framework to understand the qualifications, skills and competences required for the effective management of water services
- reviewing options to ensure that all water services organisations are led by personnel with adequate qualifications competences and skills
- developing a model to regulate the qualifications, competences and skills of water services' managers to ensure effective service provision.

Conceptual framework

The conceptual framework used considers as the basis for understanding overall competences the set of
- conceptual knowledge (knowing what);
- procedural knowledge (knowing how); and
- strategic knowledge (knowing what to do when).

Consideration is given to the manner in which this knowledge can be produced and deployed, with reference to both individual professionalisation and institutional regulation.

Given the current context on ongoing transformation and institutional change, a deliberately developmental approach is adopted which places an emphasis on providing support and guidance to individuals and institutions to help them to achieve their objectives. In this context, mandatory measures and enforcement procedures should only be adopted where it is necessary to underpin and incentivise the developmental approach.

Findings: Generic, international and South African approaches

International approaches in water and other sectors are outlined as are approaches to regulating competences in South Africa. A key finding is that South Africa has a qualifications system, an existing family of professional institutions and a system of municipal regulation that provides a supportive framework for a combination of professionalisation and regulation.

Regulation of competences in the public interest
Globally, many functions are regulated to protect the public interest. These include financial and legal personnel where substantial economic interests are at stake; health personnel where the health of individuals is potentially at risk; and many engineering disciplines, in situations where public health and safety may be put at risk. Three broad approaches are distinguished:
- simple qualification
- independent professional registration
- government registration and licensing

In the water sector, jurisdictions such as Canada and the USA have compulsory certification for water operators. Kenyan water service providers are required to possess "the necessary expertise necessary to fulfil the technical, commercial, financial and administrative functions." Slovakia has legislation setting out the qualifications required for all managers of organisations which produce or use above a set amount of water or wastewater. The American Water Works Association "fully supports mandatory certification of the persons in responsible charge of water treatment and distribution facilities.

In South Africa competences are regulated in sectors including health, engineering, electricity, accounting and law with National Treasury regulating the general competences required by Municipal Managers, Chief Financial Officers as well as other financial officers and supply chain officials. The requirement for a senior manager in large municipalities or entities (those with a budget of >R500 million) is at least NQF level 7 in a relevant field, requiring a professional qualification or an honours degree. An academic qualification is not in itself adequate evidence of competence. Other approaches include the Engineering Professions Act which empowers the statutory Engineering Council (ECSA), to "set competency standards, to register engineering practitioners and to identify types of engineering work which may be performed by persons registered." The Occupational Health and Safety Act (OHSA) establishes responsibilities of employers (including public organisations) to provide for the health and safety of persons at work and in connection with the use of plant and machinery by certificating competences.

Production of competences
The development of qualifications, skills and competences requires a combination of an appropriate pre-service educational foundation, in-service training, hands-on work experience, and lifelong learning. Competence implies as well as an adequate academic qualification, specific sector-related knowledge and, critically, the ability to apply the knowledge gained. Professional bodies play an important role in certifying these abilities.

South Africa's approach to the development of competences reflects the need to address the challenges of diversity and promote the representation of groups who were historically excluded from workplace opportunities. A framework is in place through the South African Qualifications Authority (SAQA) and the Sector Education and Training Authorities (SETAs) produce working competences through:
- identification of areas in which competences are to be developed;
- description and evaluation of the specific qualifications and skills that are required;
- accreditation of existing or new educational programmes to address these specific qualifications; and
- implementation of the programmes and monitoring of the results.

Government's traditional role in the production of qualified personnel in key domains through bursaries for study and job opportunities with structured development for new graduates has diminished because of a low number of qualified black applicants and resistance to expand the bursaries to other groups. Government also has less capacity to provide structured training for professional certification in technical areas.

The role of professional organisations is demonstrated in the Municipal sector by the training programme of IMFO which was established to assist municipal staff to meet the working requirements of their employers and to meet the standards set in regulations.

Deployment of competences
There is a shortage of adequately qualified personnel in many areas. Some commentators suggest that Government should "urgently improve salaries for registered engineering professionals in order to attract, retain and build engineering expertise." However, particularly in local government, qualified personnel have routinely been substituted by others who are not

appropriately qualified. Evidence suggests that the existence of qualified personnel does not guarantee that they will be deployed.

Approaches to ensure that appropriate competences are deployed to key functions in the municipal and related domains include the identification of specific technical areas in which professional registration is required and the setting of competency levels for senior managers (in both municipalities and public entities) with mandatory qualifications and experience.

The issue of affirmative action is important in the South African context. The Supreme Court recently ruled that the health and safety of the public must be the overriding concern. This is important to ensure the deployment of appropriate competences.

Categorisation of municipalities and regional utilities
A specific challenge for the water services sector is that there are substantial differences between different municipalities which mean that it would not be appropriate to apply the same standard to all. There is no single agreed classification but key dimensions for categorisation for regulatory purposes will be population, settlement size, extent of infrastructure and financial resources available for water services from user charges and budgetary sources. Water Boards and related utilities will also have to be categorised.

The model

Based on the findings, it is concluded that an appropriate model for South Africa would be municipal regulation that requires water service institutions to use qualified personnel to take management responsibility for the provision of water supply and sanitation services. Regulations should be promulgated in terms of the Water Services Act to ensure that they are applicable to all water services institutions, reflecting the approach already adopted by National Treasury and DPLG.

This would establish a category of certified water services manager (CWSM). The content of minimum qualifications for CWSMs would be set in terms of the processes established under the National Qualifications Framework.

A Water Services Professional Council, led by existing professional institutions with participation of key government and training stakeholders would undertake the standard setting process as well as the certification of CWSMs and the implementation of other requirements such as structured training programmes and continued professional development. Suggestions are given for the implementation of this model.

ACKNOWLEDGEMENTS

ABBREVIATIONS

AWWA	American Water Works Association
CPD	Continuing professional development
CWSM	Certified water services manager
DM	District Municipality
DPLG	Department of Provincial and Local Government
DPSA	Department of Public Service and Administration
DWAF	Department of Water Affairs and Forestry
ECSA	Engineering Council of South Africa
EPA	Engineering Professions Act (46 of 2000)
IMESA	Institute of Municipal Engineering of South Africa
IMFO	Institute of Municipal Finance Officers
LM	Local Municipality
NT	National Treasury
OCHSA	Occupational Health and Safety Act 85 of 1993
SAICE	South African Institution of Civil Engineers
SALGA	South African Local Government Association
SETA	Sector Education and Training Authority
WISA	Water Institute of Southern Africa
WSA	Water Services Authority
WSP	Water Services Provider
WSPC	Water Services Professional Council

Table of Contents

x

1.   Introduction

1.1 Challenge and context

The effective provision of water supply and sanitation services is essential for the social and economic life of all communities, contributing to economic activity and livelihoods as well as to the maintenance of healthy communities and sustaining the national environment. It is considered by citizens to be an important duty of government.

In South Africa, the universal provision of water supply and sanitation services was identified as an important policy objective and, as such, was included in the Reconstruction and Development Programme which was the manifesto and mandate for the democratic government that was elected in 1994.

This priority was reflected in the programmes of successive administrations and resulted in a substantial extension of services to a growing proportion of the population, leading to the claim in 2002 that the country had already achieved the Millennium Development Goals for water of halving the proportion of people without access to an improved water source (although not for access to safe and hygienic sanitation facilities). (DWAF, 2002)

In terms of the constitutional allocation of roles and functions, responsibility for service provision lies with the local government sphere. The programme of service provision thus became part of the broader programme of local government development.

As this process unfolded, the challenge of operating and maintaining the services for which infrastructure had been provided became steadily more critical. Concern has been expressed in many quarters that, particularly in the poorer, more rural, municipalities, the quality and reliability of the services was inadequate. This was confirmed, in part, when Department of Water Affairs and Forestry (DWAF) announced that many municipalities were failing to take the necessary action to assure that drinking water quality standards were met. (DWAF, 2005)

While this was due, in part, to financial constraints, it has become evident that the absence of sufficient and sufficiently skilled personnel to oversee and operate the services has been an important contributor to these problems. One indicator of this has been the steady decline in the number of technically qualified staff in municipalities at a time when the coverage of those municipalities has been extended to previously unserved municipalities (Lawless, 2005).

Thus Du Toit and Roodt (2008) identify a dramatic fall in the number of qualified people employed in local government. The number of engineers, technologists and technicians employed in local government fell dramatically from 3 461 in 2000 to 2058 in 2004. However, while they identify the requirements of local government generally and the electricity industry and other key sectors of the economy specifically, they do not mention the water sector.

More recently, Finance Minister Trevor Manuel has said that problems at local government level range from a lack of skills and capacity through to problems in spending patterns, which tended to favour recurrent expenditure over infrastructure. (Engineering News 28 August 2008)

Various reasons have been put forward to explain the decline in the deployment of appropriately qualified and experienced personnel. These included the limited availability of appropriate engineering and scientific skills, alternative employment opportunities for those skills and rigid application of affirmative action which meant that municipalities were recruiting from a very limited pool of candidates.

Other reasons however included inappropriate appointments by municipalities due to a lack of understanding of the requirements of the water services functions as well as dimensions of

patronage with political and community pressure to appoint specific individuals, despite the fact that they were not adequately qualified for the job (see for example Zybrands, 2007).

The challenge to be addressed is thus not just to ensure that there is an adequate supply of appropriately qualified and experienced personnel in the sector but also to ensure that they are employed and empowered to undertake their functions.

1.2 A Developmental Approach to Regulation

Responsibility for addressing these challenges lies with those structures of national government with responsibility for municipalities and the services that they provide. In this regard, within the overall framework of municipal regulation established by the Department of Provincial and Local Government (DPLG) and the National Treasury (NT), DWAF has a specific mandate to regulate the water service dimension of municipal service provision. DWAF is structuring its regulatory activities and has identified a vision for the sector within which regulation plays a role. The Cabinet-approved Strategic Framework for Water Services (2003) sets out a vision for the sector with specific goals and targets.

> "The sector vision has three important elements:
> * All people living in South Africa have access to adequate, safe, appropriate and affordable water and sanitation services, use water wisely and practise safe sanitation.
>
> * Water supply and sanitation services are provided by effective, efficient and sustainable institutions that are accountable and responsive to those whom they serve. Water services institutions reflect the cultural, gender and racial diversity in South Africa.
>
> * Water is used effectively, efficiently and sustainably in order to reduce poverty, improve human health and promote economic development. Water and wastewater are managed in an environmentally responsible and sustainable manner." (DWAF, 2003).

A recent document from DWAF (DWAF, 2007) outlines the approach being taken:

> "One of the agreed sector goals is "the effective regulation of water and sanitation services. This strategy is written to give content to this goal, taking into account the policy and legislative context.
>
> "Effective regulation will assist in the realisation of this vision. Regulation is necessary to protect both the consumers of the service (services are safe, dependable, meet defined standards and are good value), as well as the providers of the service (providers have adequate resources to sustainably provide the service and are free from operational interference).
>
> "In South Africa, the question is often posed: "Why regulate when there is such a need to develop capacity and to support institutions to provide better services?" This is an important question. Perhaps the most compelling argument for effective regulation in South Africa is that regulation is needed to play a distinct role, akin to that of a referee. Weak teams need trainers and coaches, but any game still needs a referee to set the rules, monitor adherence to the rules and enforce the rules.
>
> "Nevertheless, within a developmental context, it is appropriate to focus on how to support municipalities to meet the required standards (without compromising the standards, and the measurements of these). This developmental approach is built into

the regulation enforcement protocol which is activated when a public water services institution fails to comply with regulatory requirements.

"The regulator's key tasks, in their broadest sense, can be described in terms of the following three categories:
- Set and/or interpret rules/standards and, where relevant, grant approvals.

- Monitor, analyse and publish.

- Make determinations and enforce decisions."

Thus, while many elements of the local government domain are regulated by DPLG and NT, DWAF is actively engaging within its mandate to address those dimensions that impact upon water. One of those is to ensure the competence of the people who, together, are responsible for the delivery of water supply and sanitation services. It is this human dimension that is addressed by the current study.

1.3 Scope and Structure of the Sector

Any regulation of the competences of the senior cadre of management in the water services sector has to take account of the sector's scope of activities and its structure.

The sector covers a range of activities. These include the capturing and abstraction of water from the natural resource, its purification and storage and distribution to the final user. Waste water is similarly collected from users, transported to a treatment facility and, after treatment, discharged to the environment again. These functions have both technical and financial/administrative dimensions and involve the ongoing management of the relationship between service providers and the users of the services.

The integrated nature of the water services process, its linkage with millions of individual users as well as with the environment, makes it a relatively complex system when compared with, for instance electricity production and distribution or road transportation. Its potential to impact negatively on the health of individuals and the natural environment requires close attention to its management, in order to ensure that unacceptable damage is avoided. As a result, considerable attention has been devoted worldwide to the structuring of the institutions responsible for the service.

In South Africa, the functions and the high level institutional responsibility for them are defined in both the Constitution and by sectoral legislation. In terms of the Constitution, water services are the responsibility of local government which is an autonomous sphere of government. Since the responsibility for service provision lies with local government, any analysis of the South African Water Services sector must take into account the municipal legislation which establishes the broader regulatory framework for local government institutions. This includes *inter alia* the Municipal Structures Act, Municipal Systems Act, the Municipal Finance Management Act

Under current municipal legislation, the Minister of DPLG has the option of allocating the water services function to either a District Municipality (DM) or to a Local Municipality (LM). The Water Services Act (1997) in turn makes a statutory distinction between the role of the Water Services Authority (WSA) and the Water Services Provider (WSP).

The Water Services Act (1997) requires that the water services authorities (WSA) role must be undertaken by the municipality to which the function has been allocated while the water services providers (WSP) role may be delegated or contracted to other parties by the municipality which is the WSA.

3

A Water Services Provider may thus be the WSA itself, another municipality or water institution such as a Water Board, or a variety of other organisations including community based and private entities. However, in any arrangement in which the WSP is not the same organisation as the WSA, the WSA remains responsible for the overall performance of water services. However, in the large majority of cases, the municipalities who are the WSAs are also providing the WSP function.

It has been highlighted by a number of stakeholders that the statutory distinction made in the Water Services Act (1997) between the role of the Water Services Authority (WSA) and the Water Services Provider (WSP) has to be recognized when considering the competences of the personnel required. In addition, the specific role, requirements and regulatory framework of the regional water utilities (water boards) have to be addressed.

Table: Functions of WSAs and WSPs

WSA functions	WSP functions
Policy Development and Bylaws	Setting Conditions for Provision of Water Services
Financial Planning and Management (including Tariff setting)	Financial Management and Planning (including Revenue Collection)
Contract Management	Water Services Provision Functions
Water Services Development Plan (WSDP)	Customer relations and communication
Infrastructure Development	Health and Hygiene Promotion
Water Services Provider (WSP) Arrangements (including M&E of WSPs)	Contract Management
Performance Management and Regulation	Operations & Maintenance
Health And Hygiene Promotion	Water Quality Management
Water Conservation and Demand Management	Reporting and Accountability
Reporting and Accountability	**Cross-cutting priorities**
Asset Management and Legal Matters	Local economic development
Transfer of Assets	Stakeholder participation
WSA Structural and Organisational Issues	Gender mainstreaming
Disaster Management/Preparedness)	Co-operative governance
	The Batho Pele principles

This is important because different skills are needed for WSA and WSP since their functions are different (see Table above). The management of WSAs requires a broad strategic understanding of service provision, its objectives and the legal framework within which it is undertaken. The WSP on the other hand requires a more operational set of competences as well as the ability to interface with and respond to the regulatory framework as well as to engage effectively with service users. Regulation must thus address both the competences required by the WSA as well as those required by the WSP, where that is not the same organisation.

A further practical concern is that, in many municipalities, water services are not organized or managed as a "ringfenced" activity. This means that, in many cases, the managers responsible for water services may have additional tasks and the management of certain activities, notably infrastructure planning and construction, may be undertaken by other units. In both situations, management oversight of the services may be diluted. If ringfencing is necessary for sound management, broader institutional reform may be required to create the appropriate conditions.

In addition, it is noted that regional utilities established as Water Boards by the Minister of Water Affairs are regulated in terms of the Water Services Act (1997) (Annexure 1) as well as by the regulatory framework established by NT for the financial management of public enterprises in the Public Finances Management Act (1999) and related legislation.

1.4 Goals and scope of the Study

Against this background, the current study set out to address the challenge of ensuring that adequate human resources are deployed to provide water services through:

1. Development of a framework to understand the qualifications, skills and competences required for the effective provision of water services, building on existing initiatives and structures.

2. Review of alternative approaches to ensure that all water services authorities and providers have personnel with adequate qualifications competences and skills

3. Development of a model for the regulation of qualifications competences and skills in the water services sector to ensure effective service provision, in consultation with key stakeholders notably ESETA, SALGA, DWAF and DPLG; (while LGSETA is responsible for overall municipal training, ESETA has the mandate for training in water and sanitation as well as electricity services, including at local government level).

This is a substantial challenge since, as was pointed out by stakeholders who were consulted during the study, the water services sector of a municipality includes plant operators, sectional managers, technical managers, senior managers as well as the person heading the water services component.

However, in consultation with stakeholders and the WRC, it was agreed that this study would focus on the management cadre responsible for water services at municipal level.

There are two reasons for this. The first is the great variability between municipalities of different sizes in different contexts. However, the second more important reason is that the sector will only function effectively if its leadership has a strategic understanding of its operations and is informed about the duties expected of it. Indeed, during the research, a number of examples were found where operating level staff were prevented from executing their duties properly because their senior managers did not understand the nature and importance of their specific tasks (SAPA, 2004),

2.   Methodology and Approach

2.1   General considerations

In order to inform the South African and sector-specific research, it was considered important to obtain two separate perspectives:

- international, understanding how other countries tackle the challenge of ensuring adequate competences in water services and related sectors; and

- cross sectoral, in South Africa, understanding how similar sectors have addressed the challenge

These perspectives were sought both to bring international learning to bear on the analysis but also to ensure that the recommendations made were appropriate to and aligned with broader public sector management practice in South Africa.

2.2   Overall approach

The overall approach to the project has thus been to build on work already done with WRC support to review the capacity needs of the water services sector to:

- Develop an understanding of the appropriate generic approaches to ensuring the deployment of appropriate qualifications, competence and skills in a technical sector such as Water Services through literature review and consultation with specialists in the field;

- Develop an understanding of the specific qualifications, competences and skills required in the South African water services sector by consulting the international literature in the field as well as interacting with South African organisations in the water services field, identifying and taking account of existing initiatives and structures as well as previous research undertaken with inter alia, WRC support;

- Review water services and related (e.g. municipal, health, construction, electricity) legislation and regulations and identify current institutional arrangements for regulating qualifications, competences, training and development;

- Develop a conceptual framework and model for the qualifications competences and skills required for effective provision of water services, including an outline of resources requirements for such a model;

- Analyse and outline options for the achievement of appropriate levels of qualifications competences and skills in water services authorities and providers;

- Prepare a preliminary report on options for the achievement of appropriate levels of qualifications competences and skills in water services for consultation with sector stakeholders to validate conclusions;

- Present the approach outlined in the preliminary report to a selected group of stakeholders (see Annexure 12) for general discussion as well as to focus on the detailed issues identified above;

- Use input from this process to produce this final report which describes the options available for the regulation of competences and skills in the South African water services sector and proposes a recommended model.

2.3 Generic considerations and conceptual framework

While this is a practice oriented study, it is important to recognise that it is executed within a set of conceptual frameworks which need to be outlined. These cover three different domains, that of qualifications, skills and competences; the related domain of professionalisation; and finally, the much larger and more complex domain of regulation.

2.3.1. Qualifications, skills and competences

There are different requirements for different elements of the water services function. For example, routine technical functions (such as the operation of a water treatment works within set parameters, following explicit rules) do not need the same qualifications, competences and skills that are needed for the strategic management of a water services system in which there is a great deal of uncertainty involved in assuring effective long term service provision. The first function requires detailed technical knowledge; the second needs a broad understanding of the operational activity and the factors that affect its performance as well as the ability to project these requirements into an uncertain future and initiate appropriate responses to the changing operational environment.

It is thus useful to distinguish between what Macaulay (2000) has called:

- conceptual knowledge (knowing what);
- procedural knowledge (knowing how); and
- strategic knowledge (knowing what to do when)

These different knowledge attributes may be associated with the "qualifications, skills and competences" in the title of the original research proposal although the term "competences" has generally been used to signify the combination of the different types of knowledge.

Given the requisite resources, a person who has gained these different types of knowledge, or an organisation which has effective access to such knowledge, should be in a position to manage its day-to-day operations to the standards required as well as to evaluate its likely future challenges and the actions needed to enable it to continue to function in the future.

It is recognised that, to be successful in such an operational or strategic management role, the person concerned would still require generic management and communication competences to be able to transform personal knowledge into organizational action and performance. However, since generic management, communication and leadership skills are widely understood, the present investigation is focused on the sector-specific dimensions.

2.3.2. Professionalisation

A further generic issue is that of professionalisation. In many other fields, such as health, engineering, law and finance, the different types of knowledge and the process of acquiring and applying them have been "professionalised". In these professions, professional organisations take some responsibility for the organisation and transfer of knowledge and the regulation of the activities of those who practice in the field.

The scope and activities which are professionalized change over time. As one author has described it,

> "Professions develop when jurisdictions become vacant, which may happen because they are newly created or because an earlier tenant has left them altogether or lost its firm grip on them"   (Abbott, 1988)

As economic and social challenges emerge or are successfully addressed and reduced to routine activities, so too do professional organisations rise to meet the challenges and sometimes fade away. In this context, it is relevant to consider the emerging needs and the circumstances that may give rise to a professional response and, specifically, whether the professionalisation of water services management could help to address the needs of the sector.

2.3.3. <u>Regulation</u>

Finally, it is important to understand the conceptual framework of institutional regulation and governance within which this study is undertaken. While a discussion of the theory of regulation goes beyond the scope of the study, it should be noted that the meaning of the term is often unclear since the term "regulation" may be applied to regulation of economic, social and environmental dimensions of service provision.

Much of the current discourse is derived from the problem of economic regulation, ensuring that water services institutions, which are often monopolies, do not exploit their monopoly power at the expense of their users (Groom et al., 2006). Current theory about the regulation of water service institutions is guided by the broader theory of agency. This theory focuses on a separation of "Principal" and "Agent" (in this case national government is the Principal and the water services institutions are the agents) in which the Principal knows what it wants but does not have as much information as the Agent about performance and thus finds it difficult to ensure that its objectives are efficiently achieved. (The origin of this theory as a response to the challenge of dealing with profit-maximising private companies, and its later adaptation to the field of institutional economics, is described by Mitnick (2006)).

Many solutions have been proposed to address the Principal-Agent problem including, in the utility sector, the establishment of independent regulators to help to reduce the asymmetry of information. However, because much of this theory emerged at a time when privatisation of services was being aggressively promoted, independent regulators were also prescribed for public utilities, on the assumption that they would soon become private.

However, in the context of the South African discussion about water services, the concept of regulation is both simpler and broader and deals with the wider role of government and a more ample definition of regulation. This follows the perspective provided by a World Bank review that notes that the tools that governments can use to limit monopoly power and achieve their policy objectives include simply:

> "Regulation. Governments can use the power of the law to instruct providers to do certain things and can enforce those instructions through penalties and other forms of compulsion." (Groom et al., 2006).

Even this definition is limiting. It is important to emphasise that regulation can be formal, using hard instruments (such as statutory regulations) but also less formal, using soft instruments (such as the establishment of learning networks between organisations, aimed at improving institutional performance to meet national objectives).

The extent of regulation can thus vary widely. Its level will normally depend on the extent to which society believes that it is necessary to constrain and direct the performance of its institutions. The technical objective is to achieve a balance between undue freedom and excessive prescription. Very limited regulation may provide flexibility, allowing institutions to choose the most appropriate and efficient pathways for the execution of their functions, but not give them sufficient guidance, resulting in socially undesirable outcomes. On the other hand, excessively prescriptive regulation may constrain institutions in the way they exercise their functions, resulting in sub-optimal performance, and assumes that the regulators are more knowledgeable about the functions than the institutions themselves which is not usually the case.

A common conceptual approach is to focus solely on the regulation of the performance of institutions by requiring the achievement of the desired service delivery outcomes. This assumes that the institutions will want to perform well and that to do this, they will, amongst other things, find, develop and deploy appropriate competences. Where experience suggests that this is not likely, more intensive regulation may be resorted to.

If this does not yield acceptable results, Governments may also use even more direct mechanisms to control performance:

> "Instead of regulating a private utility, governments may own and operate the utility. Public utility ownership is another way of addressing the monopoly problem. Governments direct the utilities they own to achieve social, environmental, safety, and consumer protection objectives.

> "Governments do this though the *governance* mechanism. In utilities that are departments of ministries or municipalities, this is done through the normal line of command in civil service. For statutory bodies and government-owned companies, the main governance mechanism is a board, usually appointed by government. The board monitors utility management and sets the strategic direction for the utility. (Groom et al., 2006)

In the South African context, however, this is currently not an option. The Constitution does not allow national and provincial governments to impose direct ownership or governance over a range of municipal functions, which include water supply and services:

> "s.151 (4) The national or provincial government may not compromise or impede a municipality's ability or right to exercise its powers or perform its functions". (Government of South Africa, 1996)

However, they do have regulatory powers, which provide the framework for the present study:

> "s. 155 (7) The national government … and the provincial governments have the legislative and executive authority to see to the effective performance by municipalities of their functions … by regulating the effective performance by municipalities of their executive function…." (Government of South Africa, 1996)

The art of regulation is to target it to the achievement of clear objectives and then to find the balance between regulation which is too weak and vague and that which is too constraining. In both cases, it is as important to provide incentives to perform well, which must include credible sanctions against institutions which fail to achieve the objectives that are set for them. This study is thus an exercise in understanding the objectives of water services institutions, identifying the options to achieve them and considering the appropriate balance that could be struck in the specific circumstances of South Africa.

3. Key Findings and Discussion

3.1   Introduction

A number of factors are essential if water supply and sanitation services are to be provided in a manner which effectively meets their goals. These include clearly mandated organisations with adequate finance which have the capacity, including knowledge and personnel, to undertake their service provision activities.

Within this set of requirements, the availability of management personnel who have the ability to organise, deploy and direct the resources needed to ensure the provision of services is critical. In considering the requirements for the management of water services (or any other complex system), it is thus necessary to consider the personal attributes required by the managers. But it is not enough simply to produce personnel with the required profile. These personnel must be appointed to positions in which they can exercise guidance over the management of services and enabled to perform this function.

This has repeatedly been demonstrated in an international context. One example is an important longitudinal study in East Africa into the household experience of water supply services. This found that, over a period of thirty years during which extensive investments were made in water supply infrastructure, the reliability of water services had declined and the amount of water used, particularly by urban households, had fallen sharply (Thompson et al., 2001). The study highlighted that effective and sustainable provision of water services requires not just technical (engineering and scientific) skills, but also a range of broader institutional and financial competences.

This point has been highlighted by many key stakeholders in South Africa and demonstrated empirically by Mjoli and Schoeman who, in their review of capacity needs for the Water Services Sector (Mjoli and Schoeman, 2006), identified deficits in areas ranging from strategic management to health related subjects.

A systematic review must therefore start with the nature of skills and competences required; moving then to the processes through which they can be acquired; and finally, consider different approaches to the regulation of their deployment and application in practice.

3.2   **Development of qualifications, skills and competences**

3.2.1.   *Generic Approaches*

A number of generic approaches to the development of qualifications, skills and competences can be identified, some or all of which may be required in different situations. The challenge is well expressed in the context of a specific dimension of health care, that of pharmacy:

> "For pharmacists – as with all professionals – education must be regarded as a continuum. While an appropriate, competency-based education can prepare a pharmacist to enter practice, no professional program can provide or develop all the knowledge, skills, attitudes and values that a pharmacist will ever need. These require a combination of an appropriate pre-service educational foundation, in-service training, hands-on work experience, and lifelong learning."   (Rouse, 2005)

3.2.2.   *Education and training*

As outlined above, educational and training processes are generally recognised to be the starting point to achieve competences in any given field. They certainly provide the foundation on which

the development of competences rest. However, in both education and training, there need to be mechanisms to ensure that the appropriate fields of knowledge are identified and some form of quality control to ensure that it is transmitted at an appropriate level. An appropriate balance also needs to be struck between the general intellectual development inherent in the educational process and the more application-specific elements inherent in training. A further consideration is that provision of appropriate education and training does not in itself ensure that it will be deployed to where it is needed.

3.2.3. *On-the-job experience*
On-the-job experience traditionally served as the mechanism for knowledge transfer. However, it is not a particularly effective mechanism for transmitting the higher level theoretical knowledge that is required to underpin good practice. For this reason, its main contribution is often to provide an understanding of the context within which the more theoretical knowledge can be applied. On-the-job experience may be gained in a structured framework or informally. A key concern is to ensure that experience of a sufficient range of different situations is obtained which is easier to achieve through a structured programme. The appropriateness of experience is a particularly difficult area to evaluate. A structured approach to providing on-the-job experience is often an integral part of a strategic approach to overall skills development.

3.2.4. *Professional regulation*
In many areas of activity, oversight over the quality of the process of transmitting knowledge and gaining appropriate experience is the domain of the professional organisation. Such organisations may be self-regulating or regulated by government. It should be recognised that professional organisations compete for jurisdiction and, in self-regulating environments, may have incentives to limit access rather than to promote it.

Abbott reminds us that professions are often in competition with each other (Abbott, 1988). Thus the accountancy profession has fragmented as different groups of auditors, accountants and others seek to take a share of the market for specialised financial work. The evolution of professional organisations focusing on public sector work such as Institutions of Municipal Engineers or Finance Officers is a South African illustration of this trend.

Once again, however, the existence of a pool of professionally qualified personnel is no guarantee that they will in fact be deployed.

One element of professional regulation is a requirement for continuing professional development (CPD). This is particularly important in fields of activity where senior personnel need to stay up to date in the face of rapid change and development. Professional organisations typically play a critical role in this activity, whether by encouraging and promoting networking and knowledge sharing activities or by managing and regulating formal CPD processes.

3.2.5. *Government regulation*
Potentially the most rigorous approach is for government to regulate qualifications and experience either directly or in association with professional organisations. One important finding is that a framework is already in place to do this using the powers given to the Minister of Water Affairs and Forestry by the Water Services Act, within the overall provisions of municipal systems and finance legislation. While this may appear to be the most effective approach, it is dependent on the quality of oversight of the process and the extent to which it is vulnerable to political pressure to deviate from the overarching formal public objectives. The potential tension between professional oversight and state regulation is well demonstrated by the debate about the reform of professional councils in South Africa (ECSA, 2008).

One way in which government regulation can have a direct impact on the "demand side" is by requiring that service organisations use appropriately qualified personnel. In some sectors, where activities are carried out by substantial organisations, government regulation may be limited to the organisation itself, on the assumption that the organisation will, in terms of good governance and

for its own protection, employ appropriately qualified personnel. This may in turn depend on having adequate sanctions to incentivise senior managers to comply with requirements. In organisations with weak incentives for compliance – which often include public agencies – a more focused form of regulation may be applied.

3.3   International context and experience of other sectors

The challenge of ensuring that the appropriate level of expertise is provided is not limited to the water services sector or to South Africa. Globally, there are a range of functions which are considered to be sufficiently important to require some intervention or regulation to ensure that the public interest is protected.

These include financial and legal personnel where substantial economic interests are at stake; health personnel where the health of individuals is potentially at risk; and many engineering disciplines, in situations where public health and safety may be put at risk. There are also many instances in which the expertise of personnel is controlled to some degree in areas such as education (where there is often some control on the qualifications of educators).

Three broad approaches can be distinguished:
- simple qualification
- independent professional registration
- government registration and licensing

With senior public servants, the balance expected between general management competencies and specific professional and technical skills and expertise varies between countries. One review (of top public servants in **five developed countries**) found that the USA gives high priority to this dimension of specific professional skills while it is of medium priority in New Zealand and Australia but not formally mentioned in UK and Netherlands. This may reflect the fact that public organisations in developed countries usually have a substantial pool of technical expertise available to support top management. Alternatively, adequate technical skills may simply be taken for granted in the same way that team working abilities were not mentioned in most of the jurisdictions considered. However "strategic vision", which must have a technical component, was universally considered to be a critical competency in top management. (Bhatta, 2001)

A further alternative that may be considered, as identified above, is simply to hold organisations responsible, as juristic persons, for their performance and to proceed on the assumption that the organisation will ensure that it obtains appropriate advice in order to perform.

This has proved controversial, even where organisations are very strictly regulated. Thus, **in the United Kingdom**, a crime of "Corporate Manslaughter". (Government of United Kingdom, 2007) has been introduced to cover cases where harm is caused because organisations do not take adequate preventative measures. Proposals to increase the size of fines so as to punish the organisation rather than individual managers are being considered and have raised concerns in the water industry, which is extensively regulated, but is still considered to be particularly vulnerable:

> ".. the moral incentive for most senior management teams to have in place robust procedures to avoid causing death and injury, the risk of adverse publicity and its consequences is generally a sufficient deterrence to taking short cuts in relation to health and safety."   (Water UK, 2008)

In the water sector specifically, many jurisdictions (including **Canada and the USA**) have compulsory certification for water operators in addition to overall organisational regulation. This sometimes applies to higher levels of management as well.

In **Kenya**, s.5.1 of the Service Provision Agreements between the Regional Water Services Boards and urban water service providers under the Water Act of 2002 (Water Services Regulatory Board 2007) defines the first obligation of the Provider as being:-
> "to ensure that it possesses and retain all the necessary expertise necessary to fulfil the technical, commercial, financial and administrative functions."

Service Providers are already required to provide details of the academic and professional qualifications of both Board members and key management staff. In addition, it has recently been proposed that the forthcoming statutory "rules" of the Regulatory Board should "be very explicit on the qualifications of the professionals in the water services sub-sector (must be registered and licensed water engineers)".

In **Slovakia**, legislation was put in place in 1976 (Ministry of Forest and Water Management of the Slovak socialist Republic, 1976) setting out the qualifications required for all managers of organisations which produce or use above a set amount of water or wastewater:

> Qualification of water managers
> Article 7
> (1) Water manager may be the worker, who achieved University or complete secondary professional education in the water management, chemical-technological, or in any other similar area, respectively complete secondary general education, followed by specialised course for water mangers. The degree of required education will be determined by the organisation, adequately to the character of the working position, for which, the water manager is being established. When considering other similar statement, the character of the working position, for which the water manager is being established, and the subjects of the educational background of absolved school, is being taken into consideration.
> (2) In extraordinary cases, the worker with complete secondary general education may be established for the water manager, if, within three years from the day of his appointment, he will take specialised course for water managers.
> (3) Water managers are obliged to permanently update their knowledge at the area of handling with water, and its protection.

In the **USA**, the American Water Works Association (AWWA) has formally stated that it
> "fully supports mandatory certification of the persons in responsible charge of water treatment and distribution facilities. Further, all operators of water treatment and distribution facilities should be encouraged to gain certification."
> (AWWA, 2003)

The AWWA also addresses the need to incentivise deployment. They have suggested (AWWA, 2005) that qualifications and remuneration be linked:
> "Acquiring key competencies may be encouraged by tying it to compensation. Therefore, the Association recommends that member organizations determine the level of specialized knowledge and skills required through needs assessment, benchmarking, and the setting of performance standards. While this approach assures effective use of training dollars, it also leads to individual and organizational performance improvement."

Overall, the international trends for models of regulation and quality assurance have been summarised as follows (Rouse, 2005):
> "Models for Regulation and Quality Assurance:
> • Different models exist worldwide: traditionally a function of government; some professional organizations
> • Systems to assure entry-to-practice competence more extensive than systems to assure ongoing competence
> • Close relationship between regulation and quality assurance/accreditation

- Trend to more independent, autonomous, peer-review accreditation systems: more transparency / public input / outcomes-focused / evidenced-based."

3.4 South African approaches

3.4.1. *Introduction*

The challenge for South Africa is multi-fold. It is generally accepted that there is a shortage of adequately qualified personnel in many areas. Some commentators have suggested that the overall shortage of qualified personnel is the principal problem, compounded by conditions of service:

"For the most part a serious blockage is the dire shortage of registered engineering practitioners in our Country. Some of the solutions suggested include increased government spending on infrastructure development, market forces of demand and supply will naturally draw higher numbers into engineering. It would also be imperative for National Government Departments, Provincial Departments and Local Authorities to urgently improve salaries for registered engineering professionals in order to attract, retain and build engineering expertise. Recognition of the economic growth is crucial. From an ECSA perspective the professional engineering family must be regarded as a national asset, driving progress and sustainable development (Nayagar, 2006).

There is extensive evidence, particularly from local government, that qualified personnel have routinely been substituted by others who are not appropriately qualified. While this is sometimes done for "transformation" reasons, because of the race of those concerned, it is increasingly the result of appointments made as a result of generic political pressure or simple nepotism and corruption.

Key trends in networked water and sanitation 1989-2008 (from Eales, 2008)
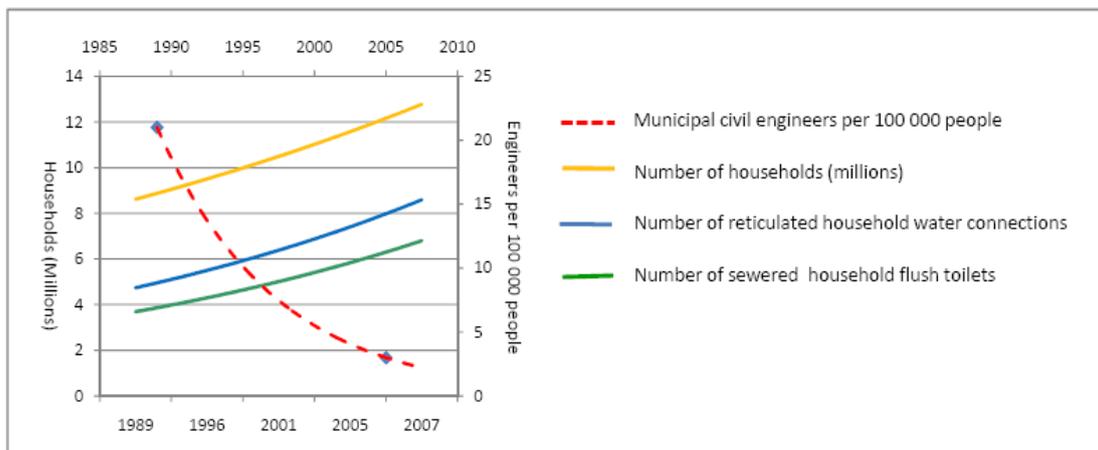
(Source: Derived from Lawless, 2007; StatsSA, 2001, 2007; DWAF 2008)

This suggests that neither a greater production of qualified personnel nor a review of salaries and other working conditions may be adequate in themselves. Indeed, if pay levels are increased, this may simply exacerbate the problem by providing greater incentives for appointments to be made on the basis of political or personal preferences. It is indeed widely recognised that, in many countries, poor public service performance is related to the extent of patronage in appointment processes (Rauch and Evans, 1999).

However, since the first step in achieving a well performing organisation is to deploy personnel who are appropriately qualified, the production of personnel with the necessary attributes is the initial consideration addressed here.

3.4.2. Development of appropriate competences

Context

There is a rapidly maturing approach to the development and assessment of competences within the workplace in South Africa. The urgent need to address the challenges of diversity and promote the representation of groups who have historically been excluded from workplace opportunities was an initial driver. This initially led to a loss of emphasis on the quality of the personnel which has subsequently begun to be addressed through a structured system.

An early competence model which has been influential in the South African context was developed by ESKOM which had, at an early stage, identified the need for an approach to human resources development that could address the cultural challenges inherent in managing organisational transformation in a diverse society. The model (see diagram, Annexure 6) considers knowledge, skills, experience and values for different functions and provides some guidance as to how it can be applied, noting that the emphasis on functional skills tends to decline in favour of generic skills at top management levels (ESKOM, 1992). The linkage between the development and assessment of individual competence, employment equity and the management of diversity is addressed more explicitly and practically by Saunders (Saunders, 2002).

Approaches to the development and assessment of competences have been systematised through the establishment of the South African Qualifications Authority (SAQA). SAQA sees the setting of standards as a process which brings together three separate sets of interests, the world of work, that of professional practice and that of curricula (see Annexure 9).

Institutional Framework

A detailed framework and strategy for Human Resources Development in the public sector has been developed and implemented by Government, through the DPSA. (A description of the formal framework is provided by DPSA, 2008 – see Annexure 3). The introduction of the National Qualifications Framework and the institutional architecture to implement it has been a significant milestone which must be taken into account in any consideration of approaches to the development and deployment of personnel.

Similarly, the establishment of the Sector Education and Training Authorities (SETAs) provided an important link between workplace and training institutions although their initial activities focused on personnel at the lower levels while professional councils have focused on the higher end which is the focus of this study. Through SETAs and the professional institutions, the framework has been put in place to produce sectoral human resource development plans, identify specific skills requirements and translate these into measurable and monitorable qualifications.

The overall system links individual employers with the sector strategy and education and training institutions through the workplace skills plan. This indicates the nature of skills and competencies available and needed in the organisations concerned. In the case of local government, it requires municipalities to develop a structured approach to meeting their staffing requirements and is a compliance plan that has to be submitted to the Department of Labour. However, since it covers the whole municipal business, it may not go into sufficient detail to address effectively the specific

requirements of a single service and there is no coordination between the plans of different municipalities.

Difficulties in achieving the appropriate balance between generic academic knowledge and application specific skills have been addressed by a joint report of the two Ministries involved (Departments of Labour and Education, 2002). Ongoing tensions have weakened progress and required the intervention of the Deputy President's office through the JIPSA programme. While the issues are most acute at lower levels of employment, they have an impact on approaches at more senior levels as well.

The potential role of professional organisations is well demonstrated in the Municipal sector by the training programme of IMFO. This has been established to assist municipal staff to meet the working requirements of their employers and to meet the standards set in regulations. It combines an appropriate mix of formal qualifications with on-the-job training and assessment. (Annexure 11)

Process
Within the institutional framework described, the process of producing competences requires:
- identification of areas in which competences are to be developed;
- description and evaluation of the specific qualifications and skills that are required;
- accreditation of existing or new educational programmes to address these specific qualifications; and
- implementation of the programmes and monitoring of the results.

Role of government in production of competences
Government at different levels traditionally played a major role in the production of qualified personnel in key domains, notably in technical areas such as engineering. This was done through two mechanisms: bursaries for study in priority areas and job opportunities for new graduates where structured development could be provided because of the scale and scope of the organisations concerned.

One serious long term consequence of the lack of incentives to join the public service, particularly at local government level, is that this is leading to a reduction in the production of personnel with the qualifications required to enable them to successfully and effectively undertake the management of water services.

These functions have been reduced for a number of reasons. In the water sector, engineering bursaries declined, in part because there was a low number of qualified black applicants. Because of employment equity considerations, bursary resources were diverted to other fields.

Another, related, reason for the decline in the production of qualified technical personnel is that government has reduced capacity to provide the structured training needed by personnel in technical areas to gain professional certification. Where opportunities are provided to gain appropriate experience in the commercial sector, the candidates often choose not to return to government employ and new employers are willing to "buy out" residual bursary repayment obligations.

3.4.3. Regulation of competences
There are many examples of the regulation of competences within different sectors in South Africa (including health, engineering, electricity, accounting and law). The two most relevant for the purposes of this review are those relating to competences in local government and those regulating the engineering professions.

The National Treasury has promulgated Regulations on Minimum Competency Levels under the Municipal Finance Management Act: (National Treasury, 2007). These set out in broad terms the

general competences required by Municipal Managers and then, subsequently, for Chief Financial Officers, other financial officers, supply chain officials and other financial officials of municipalities and municipal entities. (See Annexures 7 & 8)

However, to aid in the interpretation of the competences required, the minimum competency levels required are also set out, specified in terms of the National Qualification Framework and, where the NQF levels are not met, in terms of specific Unit Standards.

It is notable that the requirement for a senior manager in large municipalities or entities (those with a budget of >R500 million) is "at least NQF level 7 in a field relevant to the senior management position. In terms of the National Qualifications Framework, level 7 is a professional qualification or an honours degree" (SAQA, 2008).

The role of qualifications attributed by professional organisations has been considered by SAQA which concluded that it would recognise registered and quality controlled qualifications awarded by professional organisations. It distinguishes however between **professional qualifications** which cannot be revoked once it has been attained, and a **professional designation** which is awarded to candidates who comply with professional requirements, including but not limited to a professional qualification. It is recommended that professional qualifications be recognised as part of the NQF but not professional designations (SAQA, 2006 – see Annexure 5).

This approach highlights the fact that simple possession of a relevant academic qualification is not necessarily adequate as a demonstration of competence. There is thus a role for other organisations such as the professional organisations and the SETAs.

> "The most critical aspect in this regard is the application of knowledge. Too often people are able to pass exams, but then do not know how to apply that knowledge in practice. Obviously, one of the SETA requirements is to ensure that trainees are assessed on how successfully they implement their knowledge" (Zybrands, 2007).

In the municipal finance context, provision has been made for structured training to be undertaken, with a regulatory requirement that all candidates in identified posts should be qualified by the cut off date of 2013. The training process includes a substantial element of on-the-job practice and assessment as well as the oversight of a professional organisation. (IMFO, 2008 – see Annexure 11)

However, there are other frameworks that have been put in place to regulate specific technical competences in a broader domain. Of particular relevance to the water services sector is the role of the Engineering Council of South Africa (ECSA). In terms of the Engineering Professions Act (46 of 2000) (EPA), ECSA is a statutory body, empowered to:

> "amongst others, accredit educational qualifications, set competency standards, to register engineering practitioners and to identify types of engineering work which may be performed by persons registered in any other categories referred to in the EPA. The EPA further prohibits any persons not registered in terms of the Act from performing any kind of work identified for any category of registered persons. Section 14 of the EPA also obliges ECSA to take any steps which it considers necessary, where, as a result of engineering related undertakings, public health and safety is prejudiced" (ECSA, 2007) (See Annexure 3)

The centrality of the public interest, especially in relation to health and safety, in the conceptual basis for ECSA's role is spelt out in a recent submission:

> "ECSA remains cognisant of the fact that its primary mandate as a statutory body relates to the health, safety and other interests of the public in relation to engineering activities. ECSA's role in relation to the public is therefore driven by quality assurance in various forms and these functions must be carried out in full alignment with, and be contributory to, national policies and developmental imperatives." (ECSA, 2008)

While this approach assumes a significant role for professional organisations, this has recently been questioned by Government. Government acknowledges that:

> "Professional expertise remains a national asset which ought to be managed as a scarce resource of high value. It remains Government's policy that professions must be regulated from within but in line with Government's overall policies. The current legislative framework of the built environment professions envisages self-regulation by the professions to ensure quality and development within the professions, whereas Government fulfils the role of protecting the public and providing policy direction to the professions to ensure that the professions continue to meet Government's imperatives." (Department of Public Works, 2007 – see Annexure 2)

However, it identifies shortcomings in present arrangements, notably in the restricted resources available to smaller professional bodies and the failure to produce sufficient new entrants, particularly from previously disadvantaged groups. As a consequence, it proposes that:

> "Although the professional boards, under the guidance of the SACBE, will retain their role in determining qualifications which will – entitle holders thereof to registration in a registration category in terms of the new legislation, the Minister will be responsible for prescribing the said qualifications as well as the post-academic practical training and examinations that will be prescribed in order for professionals to qualify for registration in terms of new legislation.

> "It is envisaged thus that the professional boards, through the council, will make recommendations to the Minister and that the Minister will thus ensure that the conditions and requirements which are prescribed for registration are in harmony and consistent for all built environment professions and also that they advance the Government's imperative of opening access to the built environment professions and drive National Government's initiative on skills and development."

While this initiative has raised questions as to government's commitment to the independence of professional organisations, the principles of professional regulation and the restriction of certain work to specified professionals remains intact.

A final framework within which competences relevant to water services are regulated is that of the Occupational Health and Safety Act (OHSA). This establishes certain responsibilities of employers (including public organisations)

> "to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work." (Government of South Africa, 1993)

While limited to workplace-related events (and thus not to the impact of poor management on the wider community through poor performance), OHSA does provide specifically for the regulation of personnel in specific functions, many of which are relevant to the provision of water services, including mechanical and electrical engineering and the handling of hazardous substances.

The approach taken is for the Chief Inspector of the Department of Labour to issue Certificates of Competency to qualifying personnel. However, the system used falls outside the National Qualification Framework approach. It establishes a Commissioner of Examinations to certify competence and provides that this will not be done:

> "unless the candidate has passed the qualifying examination or the Commission is satisfied that the candidate possesses sufficient knowledge of the design, assembly, erection, running and maintenance of machinery, apparatus and installations, and of the Act and regulations promulgated thereunder." (Department of Labour, 1990)

From this review, it is clear that the achievement of an adequate level of competence requires more than the possession of a general academic qualification. Firstly, there is an additional need

for specific sector-related knowledge. Most critically, the final challenge is to determine the ability of an individual to apply the knowledge gained. In the domain of certifying these abilities, the professional bodies play an important role.

3.4.4. Deployment of competences

It is recognised that the production of competences is only one step towards their deployment. One problem that has been identified in South African municipalities is that inappropriate appointments are being made to key posts. In a review of the impact of training on the municipal finance function, one commentator has said that:

> "There are still too many financial officers who are not appointed on merit, albeit within the municipality's Employment Equity Plan. Section 82 of the Local Government: Municipal Structures Act, No. 117 of 1998 requires that a person appointed as Municipal Manager <u>must</u> have the <u>relevant skills and expertise</u> to perform the duties associated with that post.

> "An attempt was made in terms of the Performance Management Regulations of 1 August 2006 to at least establish some minimum criteria, e.g. possessing a degree in the field of public administration or similar, and having 5 years relevant experience.

> "There have obviously been some excellent appointments made, but it still boggles the mind that individuals, who failed in other fields, can be redeployed as municipal managers.

> "Justification arguments are often presented, but the bottom line remains that such appointees simply do not meet the appointment criteria" (Zybrands, 2007).

There are two complementary approaches that have been adopted to ensure that appropriate competences are deployed to key functions in the municipal and related domains.

The first is that of ECSA and the Department of Public Works, which identifies specific technical areas of work where the health and safety of the public is at risk in which professional registration is required. The issue of which professional organisation will be responsible and how that will be governed is still open. However, in draft regulations, the identification of areas of work which will be restricted for registered engineers is sufficiently extensive to cover most water services operations (see Annexure 4).

The other approach, to which Zybrands refers, has been adopted by the Department of Provincial and Local Government and establishes relatively general mandatory competency levels for senior managers in both municipalities and public entities, thereby placing a duty on the executive authority of those institutions to deploy appropriately qualified individuals.

Both of these options may, in the short term, require the adoption of increased remuneration to attract appropriate candidates and, to the extent that there is still a shortage, to encourage others to undertake relevant training. The options would also be supported by the adoption of structured recruitment and training programmes, starting with university bursary schemes to attract school leavers with the necessary subjects and grades and appropriate arrangements to ensure retention. Thus, in the electricity industry, it has been suggested (Mabona, 2006) that a combination of incentives and mandatory measures will be required.

> "In order to be able to help EDI in attracting and retaining competent workers standards need to be designed to identify qualified job candidates, promote career development and to recognize employee achievement. Businesses need to look into educational institutions and other industry associations to better define and develop technical job competencies and work place social skills among the potential job candidates, whom have acquired these attributes.

"EDI need to develop and implement a mandatory skills retention strategy that would enable the industry to maintain adequate levels of critical competencies."

A final issue, important in the South African context, is whether the imperative of affirmative action overrides the obligations of professionals towards the health and safety of the public and their colleagues. This has now been addressed in a Supreme Court ruling following a case brought by ECSA in the electricity industry.

"The Court's ruling was that it was the duty of a professional engineer, as is stated in the Engineering Professions Act (EPA), Act 46 of 2000, to pay due regard to public safety considerations as per Section 39(2) and 27(3) of the EPA. This duty entails that a Professional Engineer needs to satisfy himself on the strength of his qualifications, skills and experience that his employer does not embark on acts or omissions likely to endanger the safety and/or health of either the public or his fellow employees." (ECSA, 2008a)

The recognition that a professional has a duty that may override the directions of the employing authority is an important element of any overall system to ensure that the deployment of appropriate competences succeeds in protecting the public interest.

With this final clarification, it would thus appear that the building blocks to ensure the deployment of appropriate competences are in place.

3.4.5. Categorisation of municipalities and regional utilities

A final issue that has to be taken into account is the substantial difference that exists between different municipalities in terms of their spatial characteristics, the size of their populations, the types of human settlements they serve, their income and the nature of services they provide. Given this diversity, it would not be appropriate to apply the same standard to all municipalities.

However, in seeking to identify appropriate categorisations, it is evident that there is no single agreed classification. DPLG does not have a single classification system but adopts different approaches according to the specific objectives of differentiating between municipalities. For the purposes of this study, it is likely that key dimensions will be population, settlement size, the extent of infrastructure and the financial resources available for water services from user charges and budgetary sources (see DPLG, 2008, Annexure 10).

In addition to differentiating between different types of municipalities, there are also substantial differences between Water Boards and related utilities. As with the municipalities, these can be differentiated in terms of a number of variables, notably annual budget, number of staff, size and population of area served, etc. There is at present no formal categorisation in place.

4. A model for regulating the competences of water services managers

4.1 Guiding Considerations

In proposing a model approach for regulating competences in the water services sector, a key principle is that it should be consistent with general approaches in the country unless there are strong reasons to the contrary. This will ensure that the management of water services was is supported by a common regulatory culture at local government level which should strengthen the impact of sectoral regulation. Specifically, any water services framework should be coherent with the approaches currently being taken by the institutions which will be involved in its establishment, notably the local government sphere, higher education and professional organisations. It should also reflect the developmental approach adopted in the Strategic Framework for Water Services (DWAF, 2003), which recognises that South Africa is still a country in transition to a new system of governance.

The findings provide guidance to in this regard on the options practically available for South Africa to ensure that appropriate levels of staff are deployed to take strategic management responsibility for water supply and sanitation services. They serve to constrain the options available and enable a sharper focus to be placed on the underlying issues that differentiate them. Specifically, they illuminate the dimensions of the problem outlined at the outset, which assists in designing the structure and sequencing of the model proposed.

The dimensions that need to be addressed are:

- **The key competences required for the provision of water services;**

- **The institutional framework within which the broad qualifications, skills and competences required will be considered; and**

- **The different institutions which will be involved and the roles should they play in the regulatory process.**

All three dimensions will be affected by the choice of approach to be adopted, essentially involving a mix of:
- the development of individual practitioners;

- their supervision and guidance by a professional organisation; reinforced by

- formal regulation by government.

4.1.1 The competences required.
Concerns about technical issues have led to a focus on the need for engineering (and to a lesser extent) scientific expertise for the provision of water services. However, it has been emphasised by many stakeholders that, although water services are commonly seen as primarily a technical, infrastructure driven function that requires civil engineering expertise, the situation is more complex.

A lesson that emerged from the first world water decade (1981-1991) and has often been confirmed subsequently is that water services must be understood and managed as an ongoing service to users if they are to be sustainable (Parker and Skytta, 2000) This **requires a multi-disciplinary approach** and a broad set of competences. These include:

Administration, customer management and governance
Large water supply and wastewater systems are complex and require appropriate administration and information management systems and managers who understand the approaches to designing and implementing such systems. In addition, the success of water service utilities depends heavily on the establishment of structured supportive relationships with the community of service users; sufficient knowledge and understanding of different approaches to this dimension of operations is a prerequisite for effective service management. This must extend to an understanding of the governance structures which are required by public policy.

Planning and finance
Water supply and sanitation are long term activities involving substantial capital and recurrent expenditures. Investments need to be identified and planned many years before their implementation is completed. In addition to sound general management competences, there is thus a specific need for financial management skills as well as an understanding of the planning and financing of water service functions, the mechanisms used to finance capital and recurrent operational expenditure and the balance between them.

Engineering
In order for a manager to be able to ensure sustainable service provision, a basic knowledge of the principles of civil engineering involving the flow and storage of water as well as of the mechanical and electrical engineering involved in pumps and related machinery and control systems is required. Some basic understanding of chemical process engineering is also highly desirable.

Water resources and environmental management
To understand the risks facing service provision as well as to set management priorities, basic knowledge of the water cycle is required, in particular of the concepts of hydrology, variability and risk as well as of the factors that determine the quality of water resources and the general principles of environmental management.

Science and public health
A sufficient knowledge and understanding of science and public health is needed. This should cover at least the chemical and microbiological dimensions of water quality, water related diseases and their transmission; treatment processes and the broad strategies for managing drinking water quality and safety as well as water resource quality.

4.1.2   Qualification framework
In order to achieve the competences required, what is needed is:
- **basic education** sufficient to be able to access the concepts and information;
- **specific knowledge** about matters of relevance to the provision of water supply and sanitation;
- **management skills** to translate the theoretical understanding into appropriate practical action; and
- **understanding of the physical and institutional context** sufficient to know when it is relevant and appropriate to apply specific knowledge.

While basic education is not considered further in this context, a framework is required for the development of specific knowledge and management skills. The existing frameworks for oversight of qualifications as well as for municipal management serve to limit the options which are feasible in a South African context.

The regulation of competences in water services should thus be undertaken within the framework provided by the National Qualifications Framework. The setting of standards and monitoring of performance should be led by appropriate professional organisations with the

involvement of other key stakeholders including at the least representatives of the national Departments of Water Affairs and Forestry, Provincial and Local Government and Treasury.

4.1.3   *Institutional framework*

Education and training institutions

Once the formal qualification requirements have been established, there is a clear role for the institutions of higher education. One issue is whether these institutions need to make specific provision for water services management training or whether their generic offerings are already adequate.

While many of the competences identified may be addressed by generic programmes of instruction, it may be difficult to cover the diversity of the requirements. It would thus be desirable, certainly during the transitional process, for institutions to develop sector specific programmes to address the needs of senior water service managers. In this context, the professional institutions will have important standard setting and monitoring roles as well as the task of ensuring that appropriate professional experience is obtained and recognised.

Professionalisation

Beyond the standard setting process, the experience of many jurisdictions suggests that professional institutions have an important role to play in regulating the competences of senior water services managers as well as supporting their professional development. This role will include:

- standard setting (see above) and ongoing monitoring and evaluation of the standards and their implementation;
- promoting and monitoring systems to provide appropriate work-related experience in a structured manner;
- certifying appropriately qualified candidates; and
- promoting their continued professional development

In this regard, the concept of "jurisdiction" becomes important. At present, there are a number of professional institutions that could claim some jurisdiction over the area of water services management. They include, amongst others:-

- IMESA, the Institute of Municipal Engineering of South Africa
- SAICE, the South African Institution of Civil Engineers
- WISA, the Water Institute of Southern Africa

It is not clear which the appropriate institution would be for any approach in which a professional institution plays a role. IMESA was perhaps the organisation which traditionally represented the interests of the water services provider (since WISA had its origins in the specialised waste water treatment area). However, IMESA has an inherent limitation of scope to the engineering profession, as does SAICE. WISA has a broader membership base, which extends to scientists and administrators.

The Engineering Council of South Africa has taken the view that it is not necessary to restrict individual areas of activity to individual professional organisations. It would thus be possible for all three organisations (and perhaps others as well) to play a role although there would have to be structured coordination and standardisation between them.

Formal regulation – the role of government

In terms of municipal legislation, direct regulation of competences at municipal level has already been implemented. This suggests that it would be inappropriate to recommend an approach based solely on independent professional regulation. This is strengthened by the approach taken both in OCHSA and in the Engineering Professions Act which also depend on direct regulation.

Municipal legislation provides one vehicle for the regulation of municipal activity. However, the provisions of the Water Services Act empower the Minister of Water Affairs and Forestry to

regulate all water services institutions, including regional utilities such as water boards, which might otherwise fall beyond the ambit of regulation. For this reason, it would be appropriate and effective for regulations to be introduced using the Water Services Act but reflecting the approach of existing municipal regulation.

The adoption of regulatory requirements will only be effective if it is accompanied by credible sanctions for institutions which fail to comply. These sanctions cannot simply be punitive since there is an understandable reluctance to take legal action and impose fines on local governments that would further penalise the citizens of their area of jurisdiction. They can also not be imposed in a manner that would further jeopardise service provision.

It is likely that appropriate sanctions would include intervention by other spheres of government to place responsibility for the water services function with another institution; this would also entail the transfer of relevant inter-Governmental funds to such an alternative institution.

There is a potential moral hazard in that financially weak municipalities may have an incentive to give up their functions, in this way obliging other levels of government to take responsibility for service provision. This raises issues about sustainable institutional options where water services cannot effectively be provided by the formal water services authority. This issue lies beyond the scope of the present project but its resolution will be critical to the effective implementation of the recommendations.

An issue that will need to be considered but which lies beyond the scope of this study are the regulatory duties and expectations of duly certified water services managers. Most professional bodies make provision for sanction against members who do not meet professional standards or who conduct themselves in violation of professional principles. The credibility of the system will require that regulations and the processes of the professional institutions should provide for remedies in the case of a failure to perform according to such professional standards and principles.

4.2   The Model

From the discussion in previous sections, it is clear that the challenge of regulating and deploying competences in critical areas of public service provision is not limited to the water services sector. Specifically, many professions whose performance impacts on public health, safety and financial interests and the competences required of the top management of local government have already been regulated.

Given this, the model that has been developed proposed will follow the approach adopted in municipal regulation more generally to regulate competences in water services and the approaches used in the broader context will guide the sector-specific approach. Thus:

- The National Treasury/DPLG approach to the regulation of senior municipal managers to require the deployment of appropriately qualified personnel should be adopted, using a combination of regulatory direction underpinned by professional oversight.

- Regulation should be made in terms of the provision of the Water Services Act since this will enable all water services institutions, including water boards, to be covered.

- The generic approach of South Africa's overall skills development framework should be adopted to set qualification standards.

- The regulations should create the role of certified water services manager (CWSM) and require that the operational activities of all WSAs and WSPs should be supervised by such a certified manager.

- The competences required by CWSMs should be determined by an organisational structure instituted in terms of the regulations, comprising of persons knowledgeable about water service provision, drawn from key stakeholder groups including municipalities, water boards and relevant professional organisations.

- The competences may vary for different categories of municipality and for the roles of WSA and WSP.

- The role of educational and training institutions will be guided by the standards set. While generic courses may offer the basic qualifications, it would be desirable for targeted courses to be established and promoted, particularly in the initial years.

- The competences should not be assessed solely in terms of qualifications but in terms of a process that will allow certification of the ability of individuals to apply their theoretical knowledge in practice.

- Existing professional organisations should establish a Standards Generating Body (SGB) to lead the standard setting, assessment and certification procedures as well as register practitioners and provide ongoing professional development.

- A Water Services Professional Council (WSPC) should be established for this purpose that will include key stakeholders such as government departments, municipalities and SETAs but be led professional organisations to ensure that the objectivity of the process is maintained.

4.3 An implementation roadmap

Should this model be adopted, a structured approach will be required for its implementation. To this end, an indicative implementation roadmap is presented below.

4.3.1. *DWAF, in consultation with DPLG, NT and SALGA should*:
- Establish a programme to implement the regulation of the competences of water services managers.

- Promulgate regulations in terms of the WSA providing for a process to set standards for the minimum competences of water services managers. The regulations should:

  o establish the role of certified water services manager;

  o require that all WSAs, WSPs and related service providers should appoint a certified water services manager to take overall responsibility for the water services provided by a municipality or other water services institution and provide that this responsibility cannot be delegated or assigned;

  o provide for interim arrangements by establishing a minimum set of standards for immediate application and providing a fixed timeframe for the finalisation of detailed standards;

- provide for the management of the standard setting and certification process to be assigned to a Water Services Professional Council (WSPC) led by a consortium of professional institutions, including but not limited to WISA, IMESA and SAICE; specific consideration should be given to the inclusion of IMFO;

- include provision for sanctions against municipalities which fail to comply with the regulations;

- distinguish between the requirements of Water Service Authorities and Water Services Providers as well as of Water Boards and related regional utilities;

- differentiate between different levels of municipality and different sizes of Water Boards and regional utilities but recognise the need for key strategic competences at smaller municipalities where the water services managers are less likely to have in-house expert support.

- Undertake a review of the sanctions that will be used to ensure compliance.

  - This review should consider institutional options for interventions in the case of persistent failure to comply. Interventions could include:
    - disqualification from receipt of inter-governmental transfers;
    - temporary transfer of functions to another institution;
    - permanent transfer of functions; and
    - personal sanctions against mayors and municipal managers where there is evidence of deliberate contravention of the regulations.

  - Interventions should not be seen as punitive but primarily as a response to the inability of small financially and technically weak municipalities to undertake their service responsibilities.

  - Any intervention mechanism should include procedures to restore the service provision function to the municipality when regulatory conditions have been met.
  -

  - A process should be established by the WSPC to consider complaints against individual water services managers for failure to abide by the principles and code of practice established by the Council with provision for sanctions to be imposed.

- Establish a training and support system alongside the regulatory system in order that water service managers are able to access specialist expertise that they are unable to source locally and that a structured process of training is introduced to support the development of municipal staff who do not yet qualify.

  4.3.2   Professional institutions such as WSA, SAICE, IMESA and others should participate in the proposed Water Services Professional Council with the participation of the appropriate **SETA as well as ECSA** or its successor. The WSPC should, in collaboration with DWAF and SALGA:
  - undertake the standard setting process;
  - establish basic principles and a code of conduct to guide the performance of water services managers;
  - design and establish a formal registration system to accredit CWSMs;
  - monitor the implementation of the training and accreditation process and its effectiveness;
  - promote continuing professional development activities;
  - support DWAF and the municipalities in the implementation of the overall regulatory system; and

o in the event of a formal complaint being lodged about individual CWSMs, review the performance of the manager and impose appropriate sanctions which should include temporary or permanent deregistration.

*4.3.3. **Education and training institution*** should be invited to participate in the development of targeted specialist courses that would be deemed to satisfy the qualification requirements.

4.4   Transitional programme

A transitional programme should be established for the implementation of the regulations

- o The WSPC should be established.

- o Minimum initial qualifications should be determined by the WSPC as an immediate prerequisite for exercising the function of a CWSM during a limited transitional period.

- o Incumbents who do not possess such minimum initial qualifications should not exercise the responsibilities of a certified water services manager.

- o Provision should be made for water services managers who do not qualify immediately for certification to undergo a structured training process within a transitional period.

- o The transitional period provided for should not be longer than five years.

5. Conclusions and further work

5.1   <u>Conclusions</u>

The proposed model will only be effective if it is understood and supported by a critical mass of the key stakeholders, both institutions and individuals. The commitment of national, provincial and municipal political heads and their senior officials will be vital. Adequate resources (human and financial) will need to be allocated to the activities identified and designated officials will have to be held accountable for their implementation.

An important part of any implementation process will be to explain the challenges and the need for action. The implementation of the model must not be portrayed as a disciplinary or punitive exercise but as part of the developmental process of establishing effective service provision. While the technical details are an important part of this, it should always be emphasized that the key objective is the public interest one of protecting the health and well-being of our communities and supporting their social and economic development, now and into the future.

5.2   <u>Further work</u>

Further work will be required to implement the recommended approach, much of which will necessarily be part of a formal implementation programme rather than requiring additional research. This includes:

- Consultations with key stakeholders about the design and establishment of the WSPC.

- Determination by the WSPC of transitional minimum standards for CWSMs.

- Determination of categories of municipality and water board to be used in the regulations.

- Initiation of detailed standard setting process by the WSPC.

- Promotion of targeted specialist training programmes with educational institutions.

- Drafting and promulgation of regulations.

- Design and execution of implementation plan.

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7 Annexures

1. Water Services Act (1997) (extract)

2. Proposed Amendments of the Statutory Regulatory Framework of the Built Environment Professions Act 2008 (extract)

3. Framework and strategy for human resource development in the public service

4. Identification of Engineering Work for Persons registered in a Category contemplated in Section 18(1) of the Engineering Profession Act, 2000, (Act No. 46 of 2000) : Proposed regulation published by Minister of Public Works draft 2 (version 3) 08 August 2006 (extract)

5. The inclusion of professional qualifications on the South African National Qualifications Framework, Draft recommendations of the Review Panel on Professional Qualifications

6. Framework for the generic competency model for human resource practitioners, ESKOM, 1992

7. General Competency levels for Accounting Officers

8. Minimum Competency levels for Accounting Officers

9. SAQA 2000, The National Qualifications Framework and the Standards Setting

10. Categorisation of municipalities

11. IMFO Practical Training Programme

12. Attendees at Stakeholder consultation, 7 August 2008

ANNEXURE 1

WATER SERVICES ACT (1997) EXTRACT

Standards

9. (1) The Minister may. from time to time. prescribe compulsory national standards relating to—
(a) the provision of water services:
(b) the quality of water taken from or discharged into any water services or water resource system;
(c) the effective and sustainable use of water resources for water services:
(d) the nature. operation. sustainability. operational efficiency and economic viability of water services:
(e) requirements for persons who install and operate water services works: and
(f) the construction and functioning of water services works and consumer installations.

(2) The standards prescribed under subsection (1) may differentiate between-
(a) different users of water services: and
(b) different geographic areas. taking into account. among other factors. the socio-economic and physical attributes of each area,

(3) In prescribing standards under subsection (1). the Minister must consider—
(a) the need for everyone to have a reasonable quality of life;
(b) the need for equitable access to water services;
(c) the operational efficiency and economic viability of water services:
(d) any norms and standards for applicable tariffs for water services;
(e) any other laws or any standards set by other governmental authorities;
(f) any guidelines recommended by official standard-setting institutions;
(g) any impact which the water services might have on the environment; and
(h) the obligations of the National Government as custodian of water resources.

(4) Every Water services institution must comply with the standards prescribed under subsection (1).

ANNEXURE 2

FRAMEWORK AND STRATEGY FOR HUMAN RESOURCE DEVELOPMENT IN THE PUBLIC SERVICE (DPSA 2008)

THE HUMAN RESOURCE CONTEXT OF THE NATION		

South African/National HRD Strategy	DoE & DoL	
Strategic Framework for the Development of Human Resources in the PS	DPSA	**STRATEGIC FRAMEWORK FOR HUMAN RESORUCE DEVELOPMENT IN THE PUBLIC SERVICE**
Relevant Sector HRD Strategy *(e.g. Health or Education)*	Sector Growth & Dev. Strategy	Sector Skills Plans / Occupational Specific needs
Provincial HRD Strategy	Provincial Government	Provincial Growth & Development Strategies
Departmental HRD Plan	Line Departments	Departmental Strategic Planning
Operational Plan for HRD Directorates in Departments	Skills Planning Process	Workplace Skills Plan
Work Plan	Individual Performance Contracts/PMDS	
PDP	Individual Employee needs & gaps	

Figure 2.
Conceptual Framework for the HRD Strategy for the Public Service

A
VISION FOR HRD

A Dedicated, Responsive and Productive Public Service

BUILDING HUMAN CAPITAL FOR HIGH PERFORMANCE AND ENHANCED SERVICE DELIVERY

Pillar 1 — CAPACITY DEVELOPMENT INITIATIVES
- Fostering HEI & FETC Partnerships
- E-Learning Programmes for the Public Service
- A National / Provincial Public Service Academy with associated Provincial Academies
- Promoting Learnerships, Internships & Traineeships
- Development Programmes of Professional Bodies
- Leadership Development Management Strategies
- Integrated ABET Framework
- Workplace Learning Programmes

Pillar 2 — ORGANIZATIONAL SUPPORT INITIATIVES
- Mobilization of Management Support
- Career Planning and Talent Management
- Managing Employee Health & Wellness
- Ensuring the Adequacy of Financial, Physical & Human Resources & Facilities
- Promoting Appropriate Organizational Structures for HRD
- Performance Management & Development Systems
- Knowledge & Information Management
- Human Resource Planning Supply and Demand Management

Pillar 3 — GOVERNANCE & INSTITUTIONAL DEVELOPMENT INITIATIVES
- Utilization of the strategic role of SETAs
- Values, Ethics & a Professional Code of Practice for HRD
- Promoting HR Learning Networks
- Managing the Effectiveness of Communication
- Fostering Effective Monitoring, Evaluation and Impact Analysis
- Managing HRD Policy & Planning Frameworks & Guidelines
- Strengthening & aligning governance roles in HRD

Pillar 4 — ECONOMIC GROWTH AND DEVELOPMENT INITIATIVES
- Responsiveness to Millennium Development Goals
- Promoting Integrated and Inter-Sectoral Approaches to Developmental Priorities
- Capacity Development to promote success of Industrial & Economic Plans
- Awareness promotion of growth and development initiatives
- Integrating NEPAD, AU, Regional and Global programmes
- ASGISA, JIPSA, EPWP, PGDS, IDPs

4 PILLARS OF KEY PILLARS FOR HIGH PERFORMANCE IN THE PUBLIC SERVICE THROUGH HRD

10 CORE PRINCIPLES INFORMING IMPLEMENTATION OF HRD STRATEGY
- Focus on a Performance Levels of Employment
- Responding to Needs of Designated Groups (women and persons with disabilities)
- Cohesiveness & Integration
- Flexibility & Adaptability
- Recognizing Contextual Differences
- Maintaining a Performance Focus
- Responding to Sectoral differences
- Building Learning Communities & Organizations
- Promoting the Agenda of Development
- Continuity through Spheres of Government

LEGISLATIVE FRAMEWORK AS A FOUNDATION

35

ANNEXURE 3

PROPOSED 'AMENDMENTS OF THE STATUTORY REGULATORY FRAMEWORK OF THE BUILT ENVIRONMENT PROFESSIONS 2008 (EXTRACT)

"It was envisaged that the CBE will act as an umbrella body for the professional councils in discharging the following legislative mandate and Government policy:

- Transforming the built environments professions to deliver all the needs of society in South Africa based on international competitive practices, while reflecting the composition of the South African society;
- Protecting the public in South Africa from unsafe practices by built environment professions and ensuring good governance of the provision of professional services related to the built environment sector by practitioners in both the public and private sectors;
- Ensuring uniform implementation of government mandated policy among councils that govern the various built environment professions; and
- Advice Government on issues related to the built environment professions.

The professional councils, on the other hand, are autonomous bodies which fulfil the role of self-regulation of the various professions. The current legislation provides for the statutory councils to be responsible for:

- All matters relating to the registration of professionals with the respective professional council;
- All matters relating to accreditation of educational institutions as well as academy of training;
- Determining and identifying the work which may be performed by persons registered in terms of the applicable profession's legislation and determining the categories in which persons may register in the built environment profession in question;
- Maintaining professional standards and holding inquiries into complaints regarding the professional conduct of registered persons;
- Providing the CBE with such reports as the latter may require to discharge its statutory functions and duties;
- Developing codes of conduct in terms of which all registered persons have to abide.

(**Policy document on the proposed 'Amendments of the statutory Regulatory framework of the built Environment professions, March 2008, Government Gazette, 7 March 2008, No. 30852, Notice 337 of 2008)**

ANNEXURE 4

PROPOSED REGULATION PUBLISHED BY MINISTER OF PUBLIC WORKS
DRAFT 2 (version 3) – 08 August 2006 (EXTRACT)

Identification of Engineering Work for Persons registered in a Category contemplated in Section 18(1) of the Engineering Profession Act, 2000, (Act No. 46 of 2000)

I, Thoko Didiza, Minister of Public Works, in terms of Section 22(iii) of the Council for the Built Environment Act, 2000 (Act No. 43 of 2000) made the Regulations pertaining to engineering work which has been identified by the Council for the Built Environment in terms of Section 20(2) of the said Act, as set out in the Schedule hereto.

The provisions of this Regulation shall come into operation on the date of publication hereof.

SCHEDULE

1. Definitions

In this Schedule, any word or expression defined in the Act, has that meaning, and unless the context otherwise indicates –

(i) *"Engineering Council of South Africa" **means the Engineering Council of South Africa established by section 2 of the Engineering Profession Act, 2000 (Act No. 46 of 2000), and** "ECSA" **has the same meaning;***

(ii) *"Engineering Profession Act" **means the Engineering Profession Act, 2000 (Act No. 46 of 2000);***

(iii) *"engineering work" means the work identified in Annexureure 1 of this Schedule;*

(iv) *"improper conduct" as contemplated in Section 27(1)(3) of the Engineering Profession Act, means conduct which is in contravention of a Code of Conduct or any Code of Practice prescribed from time to time by –*

    (a) ECSA in terms of Section 36(1) of the Engineering Profession Act; or
    (b) any professional council in terms of the equivalent provisions of the applicable professions' Acts;

(v) *"practice in a category" as contemplated in section 18(2) of the Engineering Profession Act, means the regular and consistent performance, by any person, of engineering work, in a manner and at a level which may lead the public to infer that he or she is practising in any particular category of registration mentioned in section 18(1) of the Engineering Profession Act;*

(vi) *"professional council" means a council for the professions as defined in section 1(iv) of the Act, but also includes:*

<blockquote>

(aa)   South African Council for Planners established in terms of the Planning Profession Act, 2002 (Act No 36 of 2002);

(bb)   South African Council for Natural Scientific Professions established in terms of the National Scientific Professions Act, 2003 (Act No 27 of 2003); and

(cc)   South African Council for Professional and Technical Surveyors established in terms of the Professional and Technical Surveyors' Act, 1984 (Act No 40 of 1984).

</blockquote>

(vii)   *"**public**" means any person or group of persons who is, or whose environment is, either directly or indirectly affected by any engineering activity, or by a product, outcome or influence of an engineering activity, which may impact on the health, safety and interest of such person or group of persons.*

(viii)   *"**substantially practise**" means regularly and consistently carrying out engineering work identified in sections 2, 3 and 4 of Annexureure 1 of this Schedule, while accruing professional responsibility to a client or an employer for the performance of such functions;*

(ix)   *"**the Council**" means the Council for the Built Environment established under section 2 of the Act;*

(x)   *"**the Act**" means the Council for the Built Environment Act, 2000 (Act No 43 of 2000).*

2.   Engineering Work Identified for the Professional Categories of Registered Persons

(1)   The *engineering work*, as set out in Annexureure 1 of this Schedule, has been identified for persons who are registered with the *Engineering Council of South Africa* in any of the professional categories mentioned in Section 18(1)(a) of the *Engineering Profession Act,*

(2)   Unless the context otherwise indicates, nothing contained in this regulation may be construed as implying that persons:

    (a)   ordinarily referred to as artisans, such as workers skilled in a trade, mechanics, operators or craftsmen,

    (b)   managing engineering works relating to construction works and mining activities for or on behalf of an enterprise which is classified as *micro* or *very small* enterprise in terms of the Small Business Act of 1996 (Act 102 of 1996);

        are required to register in any category mentioned in section 18(1), and the exemption contemplated in section 26(4) of the *Engineering Profession Act* is deemed to apply in respect of such persons.

ANNEXURE 5

The inclusion of professional qualifications on the South African National Qualifications Framework (extract)

Draft recommendations

Based on the research report and comments made in this document, the Review Panel suggests the following draft recommendations for the inclusion of professional qualifications on the South African NQF:

1. The Review Panel's revision of the definition professional qualification be adopted, namely:
A **Professional Qualification** is based on the learning requirements for a designated profession or professional category. The attainment of a professional qualification does not in itself automatically lead to a professional designation. A professional qualification must achieve the exit level outcomes of the qualification if it is registered on the NQF for the purpose and must thus be quality assured by the designated regulatory authority. A professional qualification may not be revoked.

2. The Review Panel supports the recommendation that professional qualifications (in terms of the panel's definition) be included on the NQF.

This recommendation does not imply that qualifications that are not included on the NQF, such as those offered by international awarding bodies, are of a lesser value, or that such qualifications are not "professional". The recommendation does imply that only those qualifications that are registered on the NQF will be quality assured by the relevant ETQA and will enjoy national recognition, including articulation with other nationally registered qualifications.

3. The Review Panel is in agreement that Professional Designations not be included in the NQF. Professional bodies are however encouraged to publish the standards for professional competency in a form that supports the NQF objectives of integration, coherence of education and training requirements, articulation and portability.

4. The Review Panel concurs with the recommendation that Continuing Professional Development programmes should not be included on the NQF.

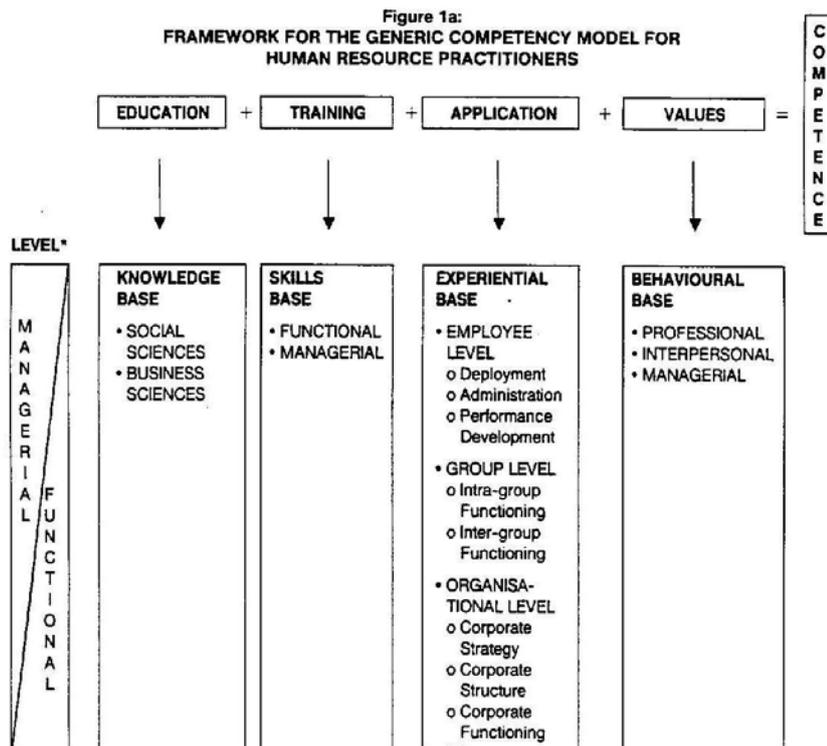The Review Panel on Professional Qualifications
20 October 2006

The inclusion of professional qualifications on the South African National Qualifications Framework Draft recommendations of the Review Panel on Professional Qualifications SAQA 20 October 2006

ANNEXURE 6

Framework for the generic competency model for human resource practitioners, ESKOM, 1990

2.2 HUMAN RESOURCE CONTENT

Human Resource jobs and the meanings of Human Resource job titles are very diverse. For this reason our model does not present job descriptions or attempt to describe individual jobs. Instead, it presents lists of Human Resource application/experience areas and their associated outputs, as well as Human Resource education requirements (knowledge areas) and training requirements (skills). These lists can be used as menus from which to select outputs and competencies pertinent to specific jobs and individuals' unique needs. Figure 1a is the framework for the Generic Competency Model for Human Resource Practitioners while Figure 1b is a more comprehensive model.

Figure 1a:
FRAMEWORK FOR THE GENERIC COMPETENCY MODEL FOR HUMAN RESOURCE PRACTITIONERS

EDUCATION + TRAINING + APPLICATION + VALUES = COMPETENCE

LEVEL*

MANAGERIAL / FUNCTIONAL

KNOWLEDGE BASE	SKILLS BASE	EXPERIENTIAL BASE	BEHAVIOURAL BASE
• SOCIAL SCIENCES • BUSINESS SCIENCES	• FUNCTIONAL • MANAGERIAL	• EMPLOYEE LEVEL o Deployment o Administration o Performance Development • GROUP LEVEL o Intra-group Functioning o Inter-group Functioning • ORGANISA-TIONAL LEVEL o Corporate Strategy o Corporate Structure o Corporate Functioning	• PROFESSIONAL • INTERPERSONAL • MANAGERIAL

* At the lower levels the knowledge/skill/experiential requirements are at a functional level. As the levels become progressively higher, these requirements will increasingly be on a managerial level.

3

40

ANNEXURE 7

National Treasury: Local Government: Municipal Finance Management Act: Municipal Regulations on

General competency levels for accounting officers

2. (1) The accounting officer of a municipality must generally have the skills, experience and capacity to assume and fulfil the responsibilities and exercise the functions and powers assigned in terms of the Act to the accounting officer of a municipality.

(2) The accounting officer of a municipal entity must generally have the skills, experience and capacity to assume and fulfil the responsibilities and exercise the functions and powers assigned in terms of the Act to the accounting officer of a municipal entity.

(3) An accounting officer must note that specific financial management responsibilities, functions and powers are entrusted by the Act to accounting officers and that any failure to comply with these may constitute financial misconduct.

Minimum competency levels for accounting officers

3. The accounting officer of a municipality or municipal entity must comply with the minimum competency levels required for higher education qualification, work

related experience, core managerial and occupational competencies and be competent in the unit standards prescribed for financial and supply chain management competency areas as set out below.

ANNEXURE 8

National Treasury: Local Government: Municipal Finance Management Act: Municipal Regulations on

MINIMUM COMPETENCY LEVELS FOR ACCOUNTING OFFICERS

Description	All municipalities and municipal entities
Higher Education Qualification	At least NQF Level 6 or Certificate in Municipal Financial Management (SAQA Qualification ID No. 48965)
Work-Related Experience	Minimum of 5 years at senior management level
Core Managerial and Occupational Competencies	As described in the performance regulations
Financial and Supply Chain Management Competency Areas:	**Required Minimum Competency Level in Unit Standards**
Strategic leadership and management	116358
Strategic financial management	116361; 116342; 116362
Operational financial management	116345; 119352; 119341; 119331; 116364;
Governance, ethics and values in financial management	116343
Financial and performance reporting	116363; 119350; 119348; 116341
Risk and change management	116339
Legislation, policy and implementation	119334
Stakeholder relations	116348
Supply Chain Management	116353

ANNEXURE 9

SAQA 2000, The National Qualifications Framework and the Standards Setting

South Africa has a framework for establishing standards for competences through the systems established by the South African Qualifications Authority. SAQA points out that

"In South Africa at least three worlds of practice will want to use national standards:

• **The world of work** will want to use standards for a multitude of purposes. These might range from performance appraisal to recruitment criteria to career 'laddering' to industrial bargaining.
• **The world of curricula** will have other agendas altogether. Although education and training takes place in many places including the world of work, the agenda of the world of work is not an industrial relations agenda, but an educational one. Practitioners in this world require standards against which they can write their curricula.
• **The professional world**, in turn, has different needs from the other two worlds. Professional bodies require standards in order to define what competent practice is so that they can license professionals to practise in South Africa."   (SAQA 2000)

Figure 2.

"The standards in the centre act as the anchor to which the other three worlds tie the design of their practices. Professional bodies will define their licensing requirements against standards, but the standards are not themselves licensing prescriptions."

ANNEXURE 10 <u>**Categorisation of municipalities**</u>

Summary of internal DPLG municipal typologies

Information on the municipal typologies	DPLG Municipal Typologies					
	The municipal typology in preparation for the Local Government Human Resource Skills Audit	**To assist with the execution of the Municipal Infrastructure Grant (MIG)**	**An Integrated Development Planning (IDP) rating system**	**To identify Project Consolidate municipalities**	**For purposes of the National Capacity Building Framework (NCBF)**	**To identify Urban and Rural Nodes**
Background	The development of this municipal typology emerged during the preparation for the local government skills audit in August 2005 from assessments of existing **support and capacity building initiatives** and the conclusion drawn that these were not having optimal impact because they adopted a "one size fits all" approach and needed to be **more targeted and differentiated** to meet the particular needs of municipalities	This municipal typology differentiates municipalities according to the **support needed** and bases this support on the analysis of **backlogs** and the **capacity to spend the allocated grant funds**	The IDP categorization was developed within the DPLG / CSIR IDP support programme to **categorize municipalities** in terms of their **ability to produce and implement credible IDPs**	Project Consolidate was launched in October 2004 to address key challenges faced by municipalities through the provision of national and provincial hands-on support aimed at **building the capacity of local government to enable service delivery**	The National **Capacity Building Framework** for Local Government (2007-2011) proposes an **adaptation of the stages of municipalities** because of the detailed description of the nature of the overall existing state of municipalities. It further notes National Treasury's classification by size, urban and rural nature	The Integrated Sustainable Rural Development (ISRDP) and Urban Renewal Programmes (URP) are two initiatives introduced by the President in February 2001 to **systematically and in a coordinated manner address poverty and under-development in those areas with the highest**

Information on the municipal typologies	DPLG Municipal Typologies					
	The municipal typology in preparation for the Local Government Human Resource Skills Audit	To assist with the execution of the Municipal Infrastructure Grant (MIG)	An Integrated Development Planning (IDP) rating system	To identify Project Consolidate municipalities	For purposes of the National Capacity Building Framework (NCBF)	To identify Urban and Rural Nodes
						concentration of population
Characteristics	The Skills Audit municipal typology is based on those intrinsic characteristics of a municipality that do not change suddenly such as, the geographic, spatial and historic / political characteristics, including characteristics such as service delivery levels, the reason being that above characteristics and existing levels of development has a direct bearing on sustainable development and the skill requirements of senior management The following 10 measures are examined in this	The following was considered in compiling the municipal typology: • Budget required / financial viability • The capacity (systems, processes and human resources) to implement MIG projects • Nature of the support required	The IDP ratings look at the following Key Performance Areas (KPAs), with specific criteria under each, towards establishing the quality of a credible Municipal IDP: • Spatial Development Framework • Service Delivery • Good Governance • Local Economic Development • Financial Viability • Institutional Arrangements • Powers and Functions • Performance Management System	The following Key Performance Elements (KPE's) are the main areas of mainstreaming hands-on support in the next 5 years: • Public empowerment, participation and community development • Capacity building, systems, human resources development and improved organizational culture • Free basic service which target poor households, appropriate billing system	The stages of municipalities and National Treasury's classification by size, urban and rural nature each type with its own criteria	To address poverty and under-development in those areas with the highest concentration of population

45

Information on the municipal typologies	DPLG Municipal Typologies					
	The municipal typology in preparation for the Local Government Human Resource Skills Audit	To assist with the execution of the Municipal Infrastructure Grant (MIG)	An Integrated Development Planning (IDP) rating system	To identify Project Consolidate municipalities	For purposes of the National Capacity Building Framework (NCBF)	To identify Urban and Rural Nodes
	classification of municipalities: • Broad spatial characteristics • Political structures • General management • Human resources • Financial aspects • Powers and functions • Technical services • Community / social services • Community participation • Integrated Development Planning (IDP)			and reducing municipal debt • Integrated human settlement development • Local economic development, job creation, Extended Public Works Programme and Municipal Infrastructure • Anti-corruption Campaign • Performance monitoring, evaluation and communication • Special intervention in rural and urban development nodes		

Information on the municipal typologies	DPLG Municipal Typologies					
	The municipal typology in preparation for the Local Government Human Resource Skills Audit	To assist with the execution of the Municipal Infrastructure Grant (MIG)	An Integrated Development Planning (IDP) rating system	To identify Project Consolidate municipalities	For purposes of the National Capacity Building Framework (NCBF)	To identify Urban and Rural Nodes
Categorisation	**Type 1**: • Local municipality • Mainly traditional authorities and or contains no established towns **Type 2**: • Local municipality • One or more towns • Predominantly within the former TBVC states **Type 3:** • One or more towns • Located outside the former TBVC states **Type 4:** • Category B Municipality • Large urban centres	**Group 1:** Large, low capacity municipality **Group 2:** Small, low capacity municipalities **Group 3:** Municipalities with no spending **Group 4:** Large, well-performing municipalities **Group 5:** Small, well-performing municipalities **All Groups** Infrastructure Management Support needed for sustainable infrastructure implementation, i.e.	<u>**1**</u> • (1-2): Poor and inadequate • Issues not addressed to any extent <u>**3**</u> • (3- 4): Gaps • Limited information on planning, projects and integration • Some issues addressed but not all <u>**5**</u> • (5-6): Most issues adequately addressed <u>**7**</u> • All integration aspects and KPAs addressed adequately • Role players	The municipalities identified during the extensive profiling exercise undertaken in all the then 284 municipalities, looking at service delivery indicators such as housing, water and sanitation, electricity, refuse removal, the number of indigent households, unemployment and income that showed that there were 139 municipalities that continued to experience challenges in the delivery of services	<u>Type 1:</u> Established ractivity <u>Type 2:</u> Stabilised <u>Type 3:</u> Consolidated <u>Type 4</u>. Sustainable	The 21 districts and townships identified to address poverty and under-development in areas with the highest concentration of population

Information on the municipal typologies	DPLG Municipal Typologies					
	The municipal typology in preparation for the Local Government Human Resource Skills Audit	To assist with the execution of the Municipal Infrastructure Grant (MIG)	An Integrated Development Planning (IDP) rating system	To identify Project Consolidate municipalities	For purposes of the National Capacity Building Framework (NCBF)	To identify Urban and Rural Nodes
	Type 5: Category A Municipality (Metropolitan)	• Development of CIPs • Backlog Eradication Strategies • Service delivery mechanisms • Role of commercial and development banks in infrastructure funding **Not classified** Performing well thus no intervention required	engaged			

External categorization of municipalities by key stakeholders

The Municipal Demarcation Board (MDB) and National Treasury have also developed municipal classification systems to assess the institutional performance of municipalities.

Summary of external municipal typologies

Information on the municipal typologies	External municipal typologies	
	Municipal Demarcation Board	**National Treasury**
Background	The MDB developed an evaluation mechanism to assess the institutional capacity of Transitional Local Councils, District Councils and Transitional Rural Councils in 2000. The aim was to identify potential capacity that could be deployed to the newly demarcated B and C municipalities.	The National Treasury has proposed two categorisations for municipalities. One relates to the fiscal issues pertaining to the allocation of powers and functions and the second relates to the implementation of the Municipal Finance Management Act
Characteristics	Points were allocated for each indicator, with a weighted system that conferred a 50% score to institutional capacity and 50% to financial viability. In addition, environmental capacity factors were taken into account in the final classification of B municipalities The following is evaluated, each with its own criteria: • Management capacity • Office support systems • Core service provided internally or outsourced • Financial viability A model for determining poorly performing district municipalities based on the following factors that could be identified as affecting the municipality's performance levels was also proposed: • the authorization for water and sanitation; • the adjustments for the roads, waste disposal and the fire fighting function; • the staff budget as a percentage of the total operating budget, and • the number of functions performed by the district municipalities over two assessment periods.	A report prepared for National Treasury in August 2004 examined the allocation of the powers and functions at municipal level, the pattern of associated resource allocation and the "distribution of revenue raising capacity" (see note under NCBF table 1). The criteria used for selecting the municipalities included the population size, the percentage of urban formal houses, percentage of households with adequate water, revenue less subsidies per household per month, and the household income profile. The categorisation of the district municipality made use of simple indices. The only criteria used to distinguish the municipalities, was the authorisation of water and sanitation.

Information on the municipal typologies	External municipal typologies	
	Municipal Demarcation Board	**National Treasury**
Categorisation	1 – Aspirant Metropolitan Areas 2 – Significant and Large Category B Municipalities 3 – Significant Category B Municipality 4 – Strong Category B Municipalities 5 – Weak Category B Municipalities 6 – Very limited Capacity Category B Municipalities	A – Cities B1 – Secondary cities B2; District Municipality without the water service authority function (Largely rural areas) B2 – Municipalities with large town as core B3 – Municipalities with significant proportion of urban population but with no large town as core B4 – Municipalities, which are mainly rural with at most, one or two small towns in their area C1 – District Municipality; with the water services authority function (Largely urban areas) C2 – District Municipality without the water service authority function (Largely rural areas)
	Municipalities are further categorized based on results obtained from the annual assessments: **1** Performing poorly 2002/03 and 2003/04 [Performed 11 or less functions with some capacity in 2002 and 2003] thus close monitoring is required **2** Performed poorly in 2002/03 but improved in 2003/04 [Performed 11 or less functions with some capacity in 2002/03 but performed more than 11 with some capacity in 2003/04] thus routine to close monitoring is required **3** Performed poorly in 2003/04 only [Performed more than 11 with some capacity in 2002/03 but performed 11 or less functions with some capacity in 2003/04] thus close monitoring is required **4** Reduced the number of functions from the 2002/03 period to the 2003/04 period but 7 or more functions [Performed more than 11 functions with capacity but the overall number of functions performed reduced by 7 or more] thus close monitoring is required **5a** Stable [No or little change in the	High capacity – municipalities with the highest budgets Medium capacity – those with 'medium-sized' budgets Low Capacity – those with small budgets

Information on the municipal typologies	External municipal typologies	
	Municipal Demarcation Board	**National Treasury**
	functions performed with some capacity between the two assessment periods but perform 30-50% of functions with some capacity] thus routine to close monitoring is required **5b** Stable [No or little change in the functions performed with some capacity between the two assessment periods and performs more than 50% of functions] thus routine monitoring is required	

It is thus recommended that **DPLG** units focusing on similar functional areas adopt similar if not the same typology that serves to address their needs or capacity but that the current internal municipal typologies remain and are implemented for the unique purpose for which they have been developed.

ANNEXURE 11

IMFO PRACTICAL TRAINING PROGRAMME

The Institute has developed a Practical Training Programme after thorough investigation of job profiles and the competencies needed to perform the task of a Municipal Finance Officer, from the lowest level to Chief Financial Officer. The Practical Training Programme is prescribed for Licentiate and Associate Members. There is no time restriction for completing the Practical Training Programme. Prospective Members are required to register as Junior Members of the Institute in order to follow the Practical Training Programme.

Junior Members must request an Associate Member of the Institute in the same local authority to act as his/her principal/mentor. The principal will act as mentor to the trainee during the practical training period. He/She will test the trainee's competency in the different functions of the practical training programme and record it in a logbook. Trainees may request their principals to test them on certain functions if they feel that they have gained enough experience. If a trainee has prior experience in finance, he/she may request the principal to test him/her on the applicable functions. Once the logbook is completed, Juniors can apply for either Licentiate or Associate membership.

DUTIES OF PRINCIPALS/MENTORS

Any Junior Member who wishes to qualify him/herself for Licentiate or Associate Membership must have a Principal for continuous assistance, for monitoring progress, giving directions regarding obligations to obtain Licentiate or Associate membership and to test competence. The Principal must declare that he/she will act as principal of the Junior member in terms of the Institute's Regulations on the application form for Junior Membership.
The role of the Principal is primarily to act as a mentor to prospective Associates and Licentiates. A mentor is a person who has gained knowledge, skills and experience, and who is not only capable of and interested in passing such attributes on to other persons, but is also able to cultivate a professional approach to all matters. However, ancillary thereto, are important responsibilities and considerations.

The Principal should:
Understand his own role and responsibilities towards the Institute. Being remote, the Institute expects the Principal to act on its behalf in achieving the objectives of the Institute as it appears in the Memorandum of Association and Articles of Association. The Principal should further uphold the Code of Conduct and generally safeguard the high standards which the Institute strives for;

Liaise closely with the trainee and his/her Chief Financial Officer to ensure that a reasonable balance exists between the interests of the Local Authority and that of the trainee and the profession;

Liaise with the trainer (normally his/her supervisor) and the Institute, where necessary;

Be fully conversant with the Regulations for Education, Training and Membership;
Ensure that the trainee properly understands the Regulations and his obligations in terms thereof.

Pay particular attention to the administration of the trainee's logbook;
Assist the trainee in understanding his role in terms of the Institute, its Code of Conduct, the profession and his employer;

Ensure that the trainee is subjected to an Induction Course in terms of the Regulations;

Ensure that training takes place strictly in terms of the Regulations. Should it become evident that the Regulations are being contravened, the Principal has an obligation to discuss the matter with the trainee and the Chief Financial Officer in the first instance and thereafter, if necessary, to advise the Institute's Chief Executive Officer;

Emphasise the importance of understanding the political environment, the Local Authority's goals and objectives, and all policy matters related thereto;

Constantly give guidance, advice and encouragement;

Encourage the trainee to freely express views, and to disagree if necessary, upon justified grounds;

Take an interest in the trainee's personal development. This, for example, could embrace development

of self-responsibility, self-organisational skills and the ability to investigate and find out matters on own initiative;

Cultivate in the trainee a sense for a professional approach in the application of the skills and knowledge gained;

Monitor progress through regular contact/interviews with the trainee and/or his trainer;

Encourage and motivate the trainee in pursuing his academic studies;

Encourage the trainee in such other matters as:
neatness of appearance;
behaviour;
human relationships;
initiative;
research;
pride in effort;
systems improvements;
leadership;
communication skills;
time management and participation in Institute activities through Provincial Branches and Interest Groups.
Regularly assess the trainee's professional status and level of appointment in the department. Neglect thereof can cause the trainee to lose faith in the profession.

As the Principal should develop a close relationship with the trainee, a good rapport between them is essential. For this reason, if possible, a trainee's preference for a particular person should be considered. Sensitivity and tolerance in discussions and debates when differing views and understandings materialise are essential characteristics.

TESTING OF TRAINEES
Article 4.4 of the Regulations reads as follows: "A trainee may at any time request his Principal to evaluate his competencies in any of the training functions with the view to have it recorded in his logbook".
Principals are permitted to use their discretion concerning the method of evaluation/testing. It could be by means of:
A personal interview;
A written test;
A case study or
A demonstration
Principals must ensure that the tests they apply will be of a professional standard. Tests must be of such a nature that it clearly proves whether a trainee has mastered the competencies of a certain function.
Should a principal fail a trainee, the principal's word will be final. The principal should, however, inform the trainee where he had erred and assist him so that remedial steps can be taken.
It is strongly recommended that one function at a time be tested.
No fixed time span is set to test a function. Principals should use their discretion in this regard.

Ex: **http://www.imfo.co.za/education.htm**

ANNEXURE 12

DEVELOPMENT OF A FRAMEWORK TO REGULATE THE COMPETENCES AND TRAINING OF MANAGERS IN THE PROVISION OF WATER SERVICES (WRC: PROJECT REF: K5/1715//3)

STAKEHOLDER WORKSHOP

<u>Attendance</u>

Water Research Commission	Jay Bhagwan
DWAF	Helgard Muller
	Thoko Sigwaza
DPLG	Sandra Greyling
City of Cape Town	Yogan Reddy
Joburg Water	Valitha Roos
Sekhukhune DM	Jackson Nkadimeng
Vhembe LM	Tshifhiwa Masakona
Gauteng Department of LG	Johan Koekemoer
SALGA	William Moroka
SAAWU	Ntombenhle Thombeni
SAICE	Allyson Lawless
SAICE ENERGYS	Peter Coetzee
ECSA	Dr Stevens
WISA	Wally Mayne