



Assessment of Training Programmes and Capacity Needs for the Water Sector

Afrosearch & Hlathi Development Services



TT 306/07



Water
Research
Commission

ASSESSMENT OF TRAINING PROGRAMMES AND CAPACITY NEEDS FOR THE WATER SECTOR

Report to the
WATER RESEARCH COMMISSION

by the

Joint Venture Partners

AFROSEARCH AND HLATHI DEVELOPMENT SERVICES

**WRC Report No TT 306/07
March 2007**

Obtainable from:

Water Research Commission

Private Bag X03

GEZINA

0031

The publication of this report emanates from a consultancy entitled "Assessment of Training Programmes and Capacity Needs for the Water Sector" (WRC Consultancy No K8/664)

DISCLAIMER

This report has been reviewed by the Water Research Commission (WRC) and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the WRC, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

ISBN 978-1-77005-554-5

Printed in the Republic of South Africa

EXECUTIVE SUMMARY

Background

The South African Government has committed itself to an ambitious target of eliminating the water and sanitation services backlog by 2008 and 2010, respectively. However, the current skills shortage at the local government level poses a threat to the achievement of the water and sanitation delivery targets. The slow rate of delivery is largely due to inadequate technical skills in most municipalities. The problem is particularly acute within rural municipalities which have the lowest resource base and, at the same time, have the highest sanitation backlog figures.

The shortage of skills is not limited to the water services sector; the water resources management sector faces a similar problem. There is a growing concern among sector stakeholders that the current approaches to skills development are not producing the numbers of skilled people that are needed to improve the performance of municipalities. This situation calls for a review of the current practices in skills development and training provided by public and private providers in order to identify factors that are hampering accelerated skills development, despite the availability of large budgets from the skills development fund.

Project objectives

The overall goal of the project has been (i) to review relevant policies, legislation and available reports on the current state of capacity building and skills development within the water sector and (ii) to compile a comprehensive inventory of all relevant water sector training courses related to degree/diploma/short training courses (accredited and non-accredited), offered by public and private sector training providers (including providers of higher education) in order (iii) to assess whether the training provided matches the skills and competence requirements of the water sector institutions.

Scope

The project has been divided into two phases: Phase 1 focuses on the assessment of the training programmes and capacity needs for water services authorities and water services providers and phase 2, which is to be undertaken as a follow-up project, will focus on training programmes and capacity needs for water resources management and water research. The study is limited to individual capacity building and training needs for the water services sector institutions, however, it acknowledges the importance of the institutional and environmental capacity for the effective functioning of water services institutions. During this phase a conceptual framework for capacity building and training for Integrated Water Resources Management has been prepared as a separate deliverable. This conceptual framework serves as a background document for Phase 2 of the study, which is to be undertaken under a separate contract.

The project deliverables included the following:

- A compendium of available studies and reports related to municipal capacity, in particular to Water Services Authorities (WSAs) and Water Services Providers (WSPs) skills and capacity requirements;
- An inventory of training, including degree/diploma course offered by public and private sector institutions, specifically targeting the capacity needed for water services delivery, water resources management and future water research capacity;
- The identification of skills required per occupational category to ensure effective WSA and WSP functioning; and
- A skills gap analysis and recommendations for addressing the capacity gaps.

Methodology

The methodology used for this study included a desktop review of relevant policies, legislation, strategic documents and available reports on studies undertaken on capacity building and training for the water services and local government sector in South Africa. An assessment of capacity building initiatives undertaken by the different water sector partners and international donors was

done to identify good practice. Information needed to compile the inventory of courses was obtained from the relevant institutions and the worldwide web. Interviews were also conducted with a few selected stakeholders from institutions such as the Departments of Water Affairs & Forestry (DWAF) and Provincial and Local Government (DPLG), the South African Local Government Association (SALGA) and the Development Bank of Southern Africa (DBSA).

Key findings

The following key findings have emerged from this study:

Policy context

From the review of the policy and legislation pertaining to skills development and training:

- It is clear that the government has put in place a very good enabling policy framework for supporting skills development and training in South Africa.
- The Skills Development Levy Act is an effective instrument for collecting the funding necessary to finance skills development and training in both public and private sectors.
- Despite this, it is unclear how effective the disbursement of the skills fund is in terms of allocation and use for supporting skills development and training programmes in the water sector.
- The weakness of the national skills development strategy is that it lacks an implementation plan and monitoring and evaluation systems (M&E) necessary to monitor progress towards achieving the skills development targets that are set out and to assess the impact of skills development in the performance of water services institutions.
- The stipulation of the national skills development policy that 80% of the skills fund should be spent on people under the age of 35 years and unemployed youth marginalizes the older and more experienced staff members who could benefit more from the training.

Skills gaps

Skills gaps have been identified in the following areas:

- Engineering professionals – There is a general shortage of engineers in South Africa. Therefore, water services institutions struggle to compete with the private sector for the limited number of experienced engineers because of poor conditions of service in municipalities.
- Technical skills – There has been a focus on promoting technical training for the lower echelons of municipal staff such as plant operators and supervisors. While this is a key focus area, the limited resources available have meant that the higher technical levels have been neglected. Currently, the registered Learnerships for water and sanitation cover NQF levels 1 to 5 and there are no Learnerships for the postgraduate levels (NQF6-8).
- Health and hygiene practitioners – There is a shortage of health and hygiene practitioners in rural municipalities where there is the greatest need for health and hygiene education in order to ensure that the provision of water and sanitation services leads to improved health for beneficiary communities.
- Financial skills - There is a general shortage of financial skills in most municipalities, which has been exacerbated by the implementation of the Municipal Finance Management Act.
- Strategic management and leadership – Despite availability of training providers and programmes in strategic management and leadership, several studies reviewed have cited a lack of strategic management and leadership in municipalities as a capacity gap. This perceived gap may be due to the generic nature of the training provided which is not appropriate for the developmental local government environment under which municipalities operate.
- Developmental local government skills – The additional role of local government as an agent of local economic development and poverty eradication requires municipal employees with skills in community development and entrepreneurship.

- Lack of skills and knowledge necessary to turn policy into practice - Changes in local government legislation has resulted in the devolution of regulatory functions to water services authorities and this necessitates the acquisition of a new set of skills by technical and management staff of the municipalities.

Institutional issues

The following institutional issues have an impact on the skills shortage in municipalities:

- Poor coordination of capacity building and training programmes for the water services sector – the assessment of available programmes showed that there are plenty of capacity and training programmes offered by different role players, including international donors. However, these frequently show misalignment with competency requirements, duplication and inappropriate content.
- Limited use of public tertiary institutions in skills development for water services sector – there is no apparent evidence that the LGSETA and/or the ESETA and its Water Chamber have established formal training partnerships with tertiary institutions so that these institutions can align their programmes to the human resource needs of the water sector.
- Change from apprenticeship to the learnership systems – the introduction of Learnerships has led to a decline in the apprenticeship system. Some stakeholders believe that apprenticeships were more effective than the Learnerships because they integrated college level technician's programmes with trade school learning. The lag in implementation of technical Learnerships is responsible for the shortage of technicians and tradesmen in all fields.
- Capacity constraints within the relevant SETAs – both the LGSETA and the ESETA lack the necessary human and financial resources required to perform the functions of coordinating skills development and training for the water sector.
- The limited skills levy-based income stream generated by the local government and water sectors is inadequate to fund skills development on the large scale necessary to meet the skills development required by the local government sector.

Good practice

The study has identified the following good practices, which could warrant further investigation for possible replication and scaling-up:

Capacity building partnerships

There are a few good examples of capacity building partnerships between municipalities and tertiary institutions, for example:

- eThekweni Municipality has launched the Siyaya Learnership Programme in partnership with the Durban Institute of Technology, targeting 1000 unemployed graduates in the Durban area. The training prepares the students for jobs in the local government sector.
- DBSA Vulindlela Academy is building strong partnerships with several universities that offer accredited training to their local government clients.
- The Municipal Training and Development Institute (MTI) of the Northern Cape could provide a unique model for building the capacity of municipal officials, once functional. In this case, the municipalities in partnership with the sector role-players (SALGA and DPLG) have established a provincial training institute for municipalities in this province. This project is funded by DWAF, SIDA and DBSA.

Improvement of the quality of Mathematics and Science in high schools

The Department of Education has established a Trust fund for supporting Dinaledi schools in mathematics and science education. The number of schools participating in the science and mathematics improvement project has been increased to 400 in 2006 and the department plans to increase this number to 529 schools in 2007. The Department has also made a commitment to pay science and mathematics teachers more money in order to retain them within the school system. If

successful, this initiative will go a long way towards increasing the pool of matric students that meet the entry requirements for science and engineering faculties.

Local Government Resource Centre (LGRC) and Local Government Network (LGNet)

This is an initiative of DBSA that provides municipalities with a one-stop shop for all sources of information and the support that they need to build capacity in order to improve their performance. The LGRC can also be used for e-learning; this can enable municipal employees to access training materials without leaving their offices to attend training courses off-site. Other sector departments can use the Local Government Resource Centre to disseminate information to municipalities.

Conclusions

The major conclusions that emanated from the assessment of training programmes and capacity needs for the water sector include the following:

- An enabling policy framework for skills development is in place; the problems lies with the implementation of skills development policies due to a variety of problems that are highlighted in the main report.
- Studies conducted in the past by the Department of Water Affairs & Forestry and other sector partners have made practical recommendations for meeting the skills and capacity needed to support the implementation of the National Water Act and the Water Services Act, but only a limited number of these recommendations have been implemented.
- Rural municipalities, which have the highest water and sanitation services backlog, are the worst affected by the shortage of skills.
- The lack of a coordinating body for training and capacity building for the water sector is hampering the effective development of skills required to achieve sustainable water and sanitation service delivery in municipalities.
- There is a mismatch between the water-related courses offered by tertiary institutions and the skills required by the water services institutions.
- The slow and limited implementation of water Learnerships severely compromises technical competency to ensure, amongst others, water operations and purification.

Recommendations

Based on the findings of the assessment of training and capacity needs for the water services sector, the following recommendations for addressing the problem of skills shortage in the water services institutions are made:

Coordinating body for training and capacity building for the water sector

Poor coordination of training and capacity building for the water sector has been identified as a major contributing factor to the skills shortage problem. It is recommended that the establishment of a coordinating body for training and capacity building for the water sector should receive high priority. The responsibility of a coordinating body could be assigned to an existing institution or a new national coordinating body which could be established and placed within an existing entity. This body should lead and oversee all the training and capacity building for the water sector and it should have the necessary authority to give effect to its mandate (it should have 'teeth'). It should be responsible for the following:

- Consultation of all the key stakeholders in order to ensure effective coordination of training and capacity building for the water sector.
- Monitoring progress in the reduction of skills shortage and evaluation of the impact of training on sector performance.
- Mobilizing resources necessary to accelerate skills development within the water sector.
- Facilitation of the establishment of training partnerships with tertiary institutions and other training service providers.

- Ensuring that the LGSETA and the ESETA and its Water Chamber cooperate with tertiary institutions so that these institutions can develop relevant training programmes needed to fill the identified skills gaps in the water sector institutions.
- Ensuring that the provision of water and sanitation Learnerships is accelerated.
- Investigate the feasibility of reviving of the apprenticeship system as an intervention for accelerating technical skills development for the water sector.

Skills and capacity gaps

- *Engineering and technical skills*

A water and sanitary engineering training programme should be launched to address the current lack of training in small water supply systems and alternative sanitation technologies in South Africa. This recommendation should be referred to the Department of Education and Council for Higher Education for consideration.

- *Health and hygiene practitioners and health promoters*

In order to address the shortage of health and hygiene practitioners and health promoters in rural municipalities, more resources should be allocated to the training of Community Health Workers (CHWs) and health promoters. Adequate numbers of Environmental Health Practitioners (EHPs) must also be trained to ensure that all rural municipalities have the necessary capacity to mentor and supervise local health promoters and CHWs. This recommendation should be referred to the Department of Health for support.

- *Strategic management and leadership*

Strategic management and leadership training programmes that are appropriate for the developmental local government environment should be developed and implemented (refer to DBSA/ Vulindlela Academy and the relevant SETAs for action).

- *Financial skills*

Training programmes are required to address the shortage of financial skills and to build the capacity necessary to ensure that municipalities comply with the requirements of the Municipal Finance Management Act (refer to DBSA/Vulindlela Academy and relevant SETAs for action).

- *Water Operator Skills*

Water Operator Learnerships are urgently required within water and waste water treatment plants.

- *Capacity constraints within the LGSETA and the ESETA's Water Chamber*

More human and financial resources should be mobilized to strengthen the capacity of the Water Chamber so that it can perform its function more effectively and efficiently. Adequate skills development funds must be allocated to both the LGSETA and the ESETA so that it can accelerate the implementation of sector skills development programmes.

- *Policy constraints*

Skills development funds should be allocated to all staff members irrespective of their age in order to improve the skills of all employees in municipalities.

Way forward

The findings and recommendations of this study should be discussed with the relevant water sector stakeholders so that appropriate implementation plans for addressing the weaknesses identified by this study can be developed.

Table of Contents

| | |
|----------------------------------------------------------------------------------------------------|-------------|
| INDEX OF TABLES | XII |
| INDEX OF FIGURES | XII |
| LIST OF ACRONYMS..... | XIII |
| CHAPTER 1: INTRODUCTION | 1 |
| 1.1 BACKGROUND | 1 |
| 1.2 OVERALL GOAL AND SCOPE OF THE STUDY | 2 |
| 1.3 OBJECTIVE OF THIS REPORT | 2 |
| 1.4 CONCEPTUAL FRAMEWORK FOR THE STUDY | 3 |
| 1.4.1 <i>Definition of capacity building</i> | 3 |
| 1.4.2 <i>Definition of skills</i> | 4 |
| 1.5 BACKGROUND TO QUALIFICATIONS..... | 5 |
| 1.5.1 <i>The National Qualifications Framework</i> | 5 |
| 1.5.2 <i>Building blocks of qualifications</i> | 6 |
| 1.6 METHODOLOGY | 6 |
| 1.7 LIMITATIONS OF THE STUDY | 7 |
| CHAPTER 2: POLICY AND LEGISLATIVE CONTEXT..... | 8 |
| 2.1 INTRODUCTION | 8 |
| 2.2 GUIDING DOCUMENTS | 8 |
| 2.3 ROLES & FUNCTIONS RELATED TO CAPACITY DEVELOPMENT | 9 |
| 2.4 ANALYSIS OF THE POLICY AND LEGISLATIVE ENVIRONMENT | 10 |
| 2.4.1 <i>Broader HR Development context</i> | 10 |
| 2.4.2 <i>Enabling policy and legislative environment</i> | 11 |
| 2.4.3 <i>Skills development strategies</i> | 11 |
| CHAPTER 3: REVIEW OF CURRENT STATE OF CAPACITY BUILDING IN THE LOCAL GOVERNMENT SECTOR..... | 12 |
| 3.1 INTRODUCTION | 12 |
| 3.2 SUMMARY OF DOCUMENTS REVIEWED | 12 |
| 3.3 REVIEW FINDINGS | 14 |
| 3.3.1 <i>Factors contributing to personnel shortages in the water services sector</i> | 14 |
| 3.3.2 <i>Factors contributing to skills shortages in the water services sector</i> | 15 |
| CHAPTER 4: WSA & WSP TRAINING PROGRAMMES..... | 18 |
| 4.1 INTRODUCTION | 18 |
| 4.2 PUBLIC SECTOR CAPACITY BUILDING INITIATIVES..... | 18 |
| 4.2.1 <i>Initiatives Identified</i> | 18 |
| 4.2.2 <i>Overview of the public sector capacity building initiatives</i> | 20 |
| 4.3 TRAINING PROVISION BY HET & FET INSTITUTIONS..... | 22 |
| 4.3.1 <i>Initiatives that have been identified</i> | 22 |
| 4.3.2 <i>Number of Graduates</i> | 22 |
| 4.3.3 <i>Overview of the available HET & FET courses</i> | 23 |

| | |
|-------------------------------------------------------------------------------------------------------------|-----------|
| CHAPTER 5: IDENTIFICATION OF THE SKILLS REQUIRED PER OCCUPATIONAL CATEGORY OF THE WSA & WSP..... | 28 |
| 5.1 INTRODUCTION | 28 |
| 5.2 REQUIRED WATER SERVICES FUNCTIONS | 28 |
| 5.3 CONTRACTING OUT FUNCTIONS AND CONTRACTING IN SKILLS..... | 29 |
| 5.4 COMPOSITE MUNICIPAL ORGANOGRAM | 31 |
| 5.5 OCCUPATIONAL CATEGORIES INVOLVED WITH WSA AND WSP FUNCTIONS..... | 32 |
| 5.6 REQUIRED SKILLS | 34 |
| 5.7 EXTRACT - SKILLS REQUIRED PER OCCUPATIONAL CATEGORY IN A WSA | 35 |
| CHAPTER 6: TRYING TO COME TO GRIPS WITH NUMBERS..... | 39 |
| 6.1 INTRODUCTION | 39 |
| 6.2 CURRENT SIZE OF THE SECTOR | 39 |
| 6.3 ARE THERE REALLY SHORTAGES? | 40 |
| 6.3.1 <i>Assessing the validity of reported shortages.....</i> | <i>40</i> |
| 6.3.2 <i>Comparing external challenges and human resources base</i> | <i>41</i> |
| 6.3.3 <i>Situation in WSAs performing a WSP role</i> | <i>43</i> |
| 6.4 MOVING TOWARDS QUANTIFICATION | 44 |
| 6.4.1 <i>Technicians, Technologists, Engineers.....</i> | <i>44</i> |
| 6.4.2 <i>Water/Waste Water Process Controllers.....</i> | <i>45</i> |
| 6.4.3 <i>Artisans and artisan assistants.....</i> | <i>45</i> |
| 6.4.4 <i>Health & Hygiene Education functions</i> | <i>45</i> |
| 6.4.5 <i>Sanitation Advocacy and Demand Responsive functions</i> | <i>46</i> |
| 6.4.6 <i>Supervisory staff requirements.....</i> | <i>46</i> |
| 6.4.7 <i>Management Staff Requirements.....</i> | <i>46</i> |
| CHAPTER 7: KEY ISSUES AND CONCLUSIONS..... | 47 |
| 7.1 INTRODUCTION | 47 |
| 7.2 KEY ISSUES EMERGING FROM THE REVIEW | 47 |
| 7.2.1 <i>Skills Shortages</i> | <i>47</i> |
| 7.2.2 <i>Gaps in HET & FET training initiatives</i> | <i>49</i> |
| 7.2.3 <i>Gaps in capacity building initiatives.....</i> | <i>50</i> |
| 7.3 GENERAL TRENDS IN SKILLS REQUIREMENTS | 52 |
| 7.3.1 <i>Municipal Skills Profiles.....</i> | <i>52</i> |
| 7.3.2 <i>Skills Development Pipeline</i> | <i>53</i> |
| CHAPTER 8: RECOMMENDATIONS | 54 |
| 8.1 INTRODUCTION | 54 |
| 8.2 A COORDINATING BODY FOR TRAINING & CAPACITY BUILDING IN THE WATER SECTOR..... | 54 |
| 8.3 THE NEED FOR SHORT-TERM SOLUTIONS | 54 |
| 8.4 ENSURING SETA ADEQUACY..... | 55 |
| 8.5 MUNICIPAL CAPACITY AUDITS | 55 |
| 8.6 LOW, INTERMEDIATE AND HIGH SKILLS | 55 |
| 8.7 OVERARCHING HUMAN RESOURCE DEVELOPMENT OBJECTIVES | 55 |
| 8.8 THE NEED FOR AN INTEGRATED APPROACH..... | 56 |

| | | |
|--------------------|-----------------------------------------------------------------------------------------------------------------|-----------|
| 8.9 | ALLOWING MULTI-ANNUAL SKILLS DEVELOPMENT INITIATIVES AND ASSOCIATED BUDGETS | 57 |
| 8.10 | URGENT SKILLS DEVELOPMENT REQUIREMENTS..... | 57 |
| 8.10.1 | <i>Engineering and technical skills</i> | 57 |
| 8.10.2 | <i>Health and hygiene practitioners and health promoters</i> | 57 |
| 8.10.3 | <i>Strategic management and leadership.....</i> | 57 |
| 8.10.4 | <i>Financial skills</i> | 58 |
| 8.10.5 | <i>Water Operators.....</i> | 58 |
| 8.11 | MOVING FORWARD..... | 58 |
| 8.12 | SYNTHESIS OF GAPS AND RECOMMENDATIONS..... | 58 |
| CHAPTER 9: | REFERENCES | 63 |
| CHAPTER 10: | APPENDICES..... | 67 |
| 10.1 | APPENDIX 1: STATUS REVIEW OF CAPACITY BUILDING IN THE WATER SECTOR | 67 |
| 10.2 | APPENDIX 2: SUMMARY REPORT OF AVAILABLE SKILLS DEVELOPMENT COURSES | 93 |
| 10.2.1 | <i>Courses that address Task Specific Water Related Skills Development.....</i> | 94 |
| 10.2.2 | <i>Courses that Address Generic Water-Related Skills Development.....</i> | 100 |
| 10.2.3 | <i>Summary of Identified Skills Gaps.....</i> | 105 |
| 10.2.4 | <i>References in Literature to Availability of Skills.....</i> | 108 |
| 10.2.5 | <i>'Goodness of Fit' Between Required Skills and Training Courses by PPETDs</i> | 132 |
| 10.3 | APPENDIX 3: REPORT ON THE BREAKDOWN OF OCCUPATIONAL CATEGORIES AND ASSOCIATED FUNCTIONS FOR WSAS AND WSPS | 138 |
| 10.3.1 | <i>Introduction.....</i> | 139 |
| 10.3.2 | <i>Methodology.....</i> | 139 |
| 10.3.3 | <i>Regulatory-based Functional Requirements</i> | 139 |
| 10.3.4 | <i>Compiling a typical municipal organogram.....</i> | 147 |
| 10.3.5 | <i>Identifying duties and required qualifications.....</i> | 147 |
| 10.3.6 | <i>Occupational categories within a municipality.....</i> | 147 |
| 10.4 | APPENDIX 4: MATRIX OF SKILLS REQUIREMENTS | 162 |
| 10.4.2 | <i>Skills required per occupational category in Water Services Authorities.....</i> | 163 |
| 10.4.3 | <i>Skills required per occupational category in Water Services Providers.....</i> | 184 |
| 10.5 | APPENDIX 5: HUMAN RESOURCES COMPLEMENT OF THE SECTOR | 199 |
| 10.5.1 | <i>The composition of water services institutions</i> | 200 |
| 10.5.2 | <i>The current human resources complement of the sector</i> | 200 |
| 10.5.3 | <i>Size differences among water services authorities.....</i> | 201 |
| 10.5.4 | <i>The organisational structure of water services authorities and water services providers ...</i> | 206 |
| 10.5.5 | <i>Occupational categories involved with WSA and WSP functions.....</i> | 207 |
| 10.5.6 | <i>Numbers of staff involved with WSA and WSP functions.....</i> | 208 |

INDEX OF TABLES

| | |
|----------------------------------------------------------------------------------------------------------------------|-----|
| Table 1: Guiding Documents for Skills Development..... | 8 |
| Table 2: Summary of document review..... | 12 |
| Table 3: Public Sector Capacity Building Programmes and Projects | 18 |
| Table 4: Universities & Universities of Technology graduates in water related fields..... | 22 |
| Table 5: Technical Qualifications | 24 |
| Table 6: Environmental Management Qualifications..... | 25 |
| Table 7: Water sector Learnerships | 26 |
| Table 8: Management related Qualifications..... | 27 |
| Table 9: Functions of WSAs and WSPs..... | 28 |
| Table 10: Occupational categories related to WSA | 32 |
| Table 11: Required skills and qualifications per occupational category in water services authorities (Extract) | 35 |
| Table 12: National totals of employment in water services sector institutions..... | 40 |
| Table 13: Comparison of average number of households per dedicated WSA staff member..... | 41 |
| Table 14: Characteristics of municipalities in the DPLG typology..... | 41 |
| Table 15: Differences between local and district municipalities that are WSAs | 43 |
| Table 16: Capacity deficits in WSAs that perform WSP functions | 44 |
| Table 17: Matrix of Skills/Capacity Gaps and Recommendations | 59 |
| Table 18: Occupational Categories and Associated Functions in respect of WSAs & WSPs | 149 |
| Table 19: Required skills and qualifications per occupational category in water services authorities | 163 |
| Table 20: Required skills and qualifications per occupational category in water services providers | 184 |

INDEX OF FIGURES

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Figure 1: Dimensions of capacity | 3 |
| Figure 2: Hierarchy of Skills | 4 |
| Figure 3: National Qualifications Framework and Training Courses..... | 5 |
| Figure 4: “The Pieces of the Puzzle” - How Specific Outcomes, Unit Standards, Certificate Qualifications and Employable Skills Units Fit Together..... | 6 |
| Figure 5: WSA performs all functions itself | 29 |
| Figure 6: WSA delegates some functions | 30 |
| Figure 7: Organogram of an “average” municipality..... | 31 |
| Figure 8: Occupational categories related to WSPs | 33 |
| Figure 9: Skills Development Pipeline..... | 53 |
| Figure 10: Problems related to capacity building and skills development: A graphical overview..... | 56 |

LIST OF ACRONYMS

| | |
|----------|----------------------------------------------------------------------|
| ABET | Adult Basic Education and Training |
| ASGI-SA | Accelerated Shared Growth Initiative of South Africa |
| BID | Background Information Document |
| BDS | Business Development Services |
| CAT | Capacity Assessment Tool |
| CB | Capacity building |
| CETA | Construction Education and Training Authority |
| CIDA | Canadian International Development Agency |
| CMA | Catchment Management Agency |
| CMIP | Consolidated Municipal Infrastructure Programme |
| DBSA | Development Bank of Southern Africa |
| DHGL | Department of Housing and Local Government (provincial) |
| DM | District Municipality |
| DoE | Department of Education |
| DoL | Department of Labour |
| DPLG | Department of Provincial and Local Government |
| DPSA | Department of Public Service and Administration |
| DRA | Demand Responsive Approaches |
| DWAF | Department of Water Affairs and Forestry |
| E&T | Education and training |
| EC | European Community |
| EPRD | European Programme of Reconstruction and Development |
| EPWP | Extended Public Works Programme |
| ESETA | Energy Sector Education and Training Authority |
| EU | European Union |
| FET | Further Education and Training |
| FPCD | Foundation for People Centred Development |
| GAAP | Generally Accepted Accounting Practices |
| GAMAP | Generally Accepted Municipal Accounting Practices |
| GET | General Education and Training |
| GTZ | German Technical Cooperation Agency |
| H & H | Health and Hygiene |
| HET | Higher Education and Training |
| HIV/AIDS | Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome |
| HRD | Human Resources Development |
| ICT | Information and Communication Technology |
| IWRM | Integrated Water Resources Management |
| JIPSA | Joint Initiative for Priority Skills Acquisition |
| KSP | Knowledge Sharing Programme |
| KFA | Key Focus Area |
| LED | Local Economic Development |
| LG | Local Government |
| LGNET | Local Government Network |
| LGRC | Local Government Resource Centre |
| LGSETA | Local Government Sector Education and Training Authority |

Capacity Needs for the Water Services Sector

| | |
|---------|------------------------------------------------------------|
| LGWLC | Local Government Workplace Learning College |
| LM | Local Municipality |
| LMSDP | Labour Market Skills Development Programme |
| LOGOLA | Local Government Leadership Academy |
| M&E | Monitoring and evaluation |
| MDG | Millennium Development Goals |
| MEC | Member of the Executive Council |
| MIG | Municipal Infrastructure Grant |
| MoU | Memorandum of Understanding |
| MTI | Municipal Training & Development Institute |
| NC | Northern Cape |
| NCWSTI | National Community Water and Sanitation Training Institute |
| NGO | Non-governmental organisation |
| NQF | National Qualifications Framework |
| O & M | Operation and Maintenance |
| PDI | Previously Disadvantaged Individual |
| PSETA | Public Service Sector Education and Training Authority |
| R & D | Research and Development |
| RPL | Recognition of Prior Learning |
| SALGA | South African Local Government Association |
| SAQA | South African Qualifications Authority |
| SD&T | Skills development and training |
| SDF | Skills Development Facilitator |
| SETA | Sector Education and Training Authority |
| SGB | Standards Generating Body |
| SIDA | Swedish International Development Authority |
| SSP | Sector Skills Plan |
| THRIP | Technology and Human Resources for Industry Programme |
| UNDP | United Nations Development Programme |
| US | Unit Standard |
| USAID | United States Agency for International Development |
| WPPSTE | White Paper on Public Service Training and Education |
| WSA | Water Services Authority |
| WSDP | Water Services Development Plan |
| WSP (1) | Water Services Provider |
| WSP (2) | Workplace Skills Plan |
| WSSSP | Water Services Sector Support Programme |
| WUA | Water User Association |

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Currently, South Africa lacks adequate human resources necessary to implement all the provisions of the National Water Act in respect of Integrated Water Resources Management (IWRM). As well, the recent changes in the regulatory framework have seen a significant change in the depth and extent of regulatory-based municipal/Water Services Authority (WSA) functioning. This process is ongoing and creates a strategic delivery arena that is characterised by the introduction of a suite of new functions and skills that are to be incorporated into municipal functioning. Added to this is the fact that the South African Government has committed itself to an ambitious target of eliminating the water and sanitation service backlog by 2008 and 2010 respectively. However, the current skills shortage at local government level is posing a threat to the achievement of the Millennium Development Goal (MDG) targets especially with regard to sanitation in the first instance and the achievement of sustainable services delivery in the longer term in the second instance.

While significant numbers of local authorities have strived to meet the regulatory challenges that have been set, experience has shown that the process of goal-directed organisational “human resource skills mapping” related to “new” areas of functioning has not really taken place yet. Many of the local authorities are still structured and operate in terms of traditional public administration approaches. While there may be a general sense of what is required, the detailed implications of regulatory and strategy requirements are not necessarily clear to role-players within local authorities (or elsewhere) in a comprehensive manner. Neither are the associated skills in place. In addition, the changes in Local Government policy and legislative framework have resulted in the decentralization of all the water service delivery functions and infrastructure to water services authorities. Unfortunately, this decentralization of functions has not been supported with the deployment of sufficient capacity to municipalities. The majority of them are struggling to absorb rapid changes and to meet the water and sanitation service delivery targets that have been set out in the Strategic Framework for Water Services (2003).

Within the water sector, the lack of skills is not limited to the water services sector; the water resources management sector is also facing a similar problem of skills shortage. South Africa has a very progressive National Water Act which has received international accolades but the challenge is how to turn the good intentions of the water law into sector practice. In terms of the Act, new water management institutions such as Catchment Management Agencies (CMAs) and Water User Associations (WUAs) are being established. These institutions are intended to bring water resources management closer to the local level. This is a radical change from the past water management approach which was mainly based on technical management of water quantity and quality. The new water law advocates for an integrated approach that includes a focus on ecological, social and economic perspectives of water resources management.

Most municipalities are struggling to meet the delivery targets that have been set, largely attributable to insufficient capacity – in particular at management and technical levels. This problem underscores the need to ensure an adequate definition of municipal competence and the associated requirements that will allow the development of long term plans for ensuring that there is a pool of people with the skills required to achieve sustainable water services delivery.

The development of a strategy to address skills development within the water sector should ensure alignment and consolidation within the South African socio-economic reform programme aimed at addressing the challenges of poverty and underdevelopment. Essential aspects of the reform programme are the need to ensure skills development that will (i) promote increased job creation opportunities within the formalised First Economy¹; (ii) allow Second Economy² job creation

¹ The 1st Economy is commonly accepted to be a modern one that is integrated within the global economy and produces the bulk of South Africa's wealth.

² The 2nd or Marginalised Economy, containing a large part of the South African population who are also ranked as the poorest of the (urban and rural) poor, is characterised by underdevelopment. It makes a minimal contribution to the GDP, cannot produce self-generated growth and development and is structurally disconnected from the 1st as well as the global economy.

initiatives with associated training on the basis of portable skills whilst (iii) building a social security net to meet poverty alleviation objectives.

President Mbeki in his State of the Nation Address of 2005 highlighted the importance of skilled human resources in the fight against poverty and underdevelopment that faces our country:

"It is...clear that more work will have to be done to raise the skills level of our people. Accordingly, the government has approved a new National Skills Development Strategy for the period 2005-2010. R21.9 billion over five years will be allocated to fund this strategy, which will include improved cooperation between the Sector Education and Training Authorities (SETAs) on one hand and the Further Training and Education colleges and institutions of higher education on the other."

Skills development within the water sector forms an integral link into the multi-level skills development approach that is a part of the government's wider socio-economic reform programme. In terms of the realities of the South African hybrid economy and the requirements for reform, skills development within the water sector must focus on strengthening the advanced or high-, intermediate- and low skills bands. As such, complementary strategies will be required in respect of each of these bands in order to ensure that an effective skills development initiative can be put in place.

1.2 OVERALL GOAL AND SCOPE OF THE STUDY

The overall goal of this project has been to gain a comprehensive overview of skills development within the sector through (i) the development of an inventory of all relevant water sector training courses related to degree/ diploma/ short training courses (accredited and – where available – non accredited), offered by public and private sector training providers (including providers of higher education); (ii) an inventory of research on water-related skills development initiatives capacity; and (iii) identify the specific skills requirements within water institutions, based on regulatory requirements as basis to assess the capacity needs as well as skills gaps of Water Services Authorities, Water Boards, Water Services Providers, Catchment Management Agencies, Water Sector Regulators and the South African water research community.

The project is being undertaken in two directed phases: Phase 1 has aimed at assessing the capacity needs within the water services sector, whilst Phase 2 will focus on the assessment of capacity needs for Water Resources Management and Water Research. It will, as well, focus on the development of long term plans for meeting capacity needs.

1.3 OBJECTIVE OF THIS REPORT

This Report sets out the findings in respect of Phase 1 of this Study. As such it provides information about Outputs 1 to 4 that aimed at:

1. The compilation of an inventory of research projects undertaken in respect of capacity development for water services, water resources and water research.
2. The compilation of an inventory of training including degree/ diploma courses (setting out a brief summary of curriculum per course) offered by public and private sector institutions specifically targeting the needs of water services delivery, water resources management and future research capacity. In addition, this inventory sought to provide an audit of the number of students qualifying from these programmes and associated career options/ choices, where such information could be obtained from the relevant training institutions.
3. The Identification of the skills required per occupational category to ensure effective WSA and WSP functioning.
4. A skills gap analysis in terms of the specific requirements from municipalities in respect of their role as Water Services Authority amongst a representative number of authorities, and recommendations for addressing the gaps.

Phase 1 required an additional Output, aimed at the development of a conceptual framework for assessing the training and capacity needs for integrated water resources management and water research in South Africa. The requirements in respect of this Output have been documented in a separate Report.

1.4 CONCEPTUAL FRAMEWORK FOR THE STUDY

The assessment of capacity needs within water services sector institutions has focused on observed deficiencies and challenges as far as water service delivery, strategic planning, compliance with legislative imperatives, etc. are concerned. These challenges were then investigated so as to identify the skills development and capacity building interventions required to address them. Despite its pragmatic approach, it was considered necessary to draw certain basic conceptual distinctions so as to delineate the nature and scope of the project. One of these distinctions concerned the relationship between the terms “capacity building” and “skills development.” The two are sometimes used as synonyms, while at other times skills development is regarded as one of several activities that comprise capacity building. The first sub-section below provides a definition of capacity – and, by extension, of capacity *building* – that was adopted for the purposes of this study. The second sub-section defines the term “skills” in detail.

1.4.1 Definition of capacity building

Capacity building within the context of local government has three components which must be in place to achieve functional institutions (National Capacity Building Framework for LG, 2004):

- ❖ **Individual capacity**- refers to the potential and competency found within a person; this is reflected as specific technical and generic skills, knowledge, attitudes and behaviour accumulated through education, training, experience, etc.
- ❖ **Institutional capacity**- is the potential and competency found within organizations. It includes human resources, strategic leadership, organizational purpose, support systems, infrastructure, financial abilities, etc.
- ❖ **Environmental capacity** – also referred to as the ‘Enabling Environment’ is the potential and competency found outside of municipalities’ formal structures. It includes socio-economic factors (tax base), demographic composition, political, legislative, social capital, natural resources, etc.

The following provides a diagrammatic representation of the different dimensions of capacity:

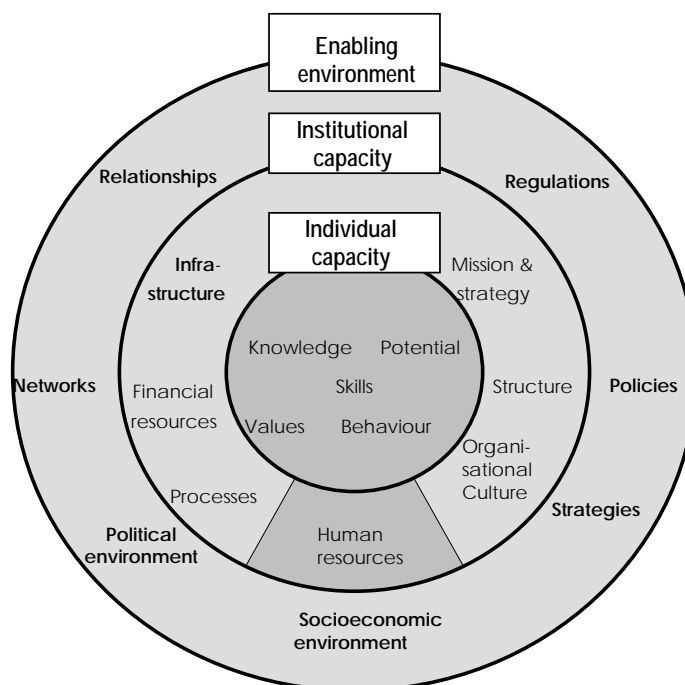


Figure 1: Dimensions of capacity

The acquisition of a task-specific skill is not, of itself, sufficient to guarantee *competency* in respect of a specific task. Competency is generally regarded as a combination of three dimensions: skill, knowledge and attitudes/values.

Individual competency, in turn, is necessary – *but not sufficient* – to ensure that an organisation will function effectively. Effective organisations also require *institutional capacity* (adequate human and financial resources) and an enabling *environment* (empowering legislation, socio-economic climate, political arrangements, etc.) Hence, skills development initiatives will not automatically translate into enhanced organisational effectiveness if they are not accompanied by organisational capacity building wherever this is required.

Within this context, capacity building may be defined as any intervention aimed at closing the gap between the capacity that an individual and/or an organisation already possesses, and the capacity it requires to achieve its objectives.

1.4.2 Definition of skills

Skills form a central component of individual capacity and it is possible to define a hierarchy of skills which consists of the following:

- ❖ **Foundational skills**- these are general skills common to all workplaces and must be in place before specific skills can be acquired, for example, the ability to read and write.
- ❖ **Generic skills** – these are skills that are more specific such as computer literacy.
- ❖ **Task-specific skills** – these skills are directly related to the context in which the individual is working, for example, a manager from the private sector may have planning skills but know nothing about Integrated Development Plans, which are specific to municipalities.
- ❖ **Capability** – which goes beyond competence by enabling individuals to “adapt to change, generate new knowledge and continue to improve their performance” (Fraser & Greenhalgh, 2001). This skill is vital in ensuring effective governance through strategic and practical management.

The hierarchic relationship among these types of skills is depicted in the figure below:

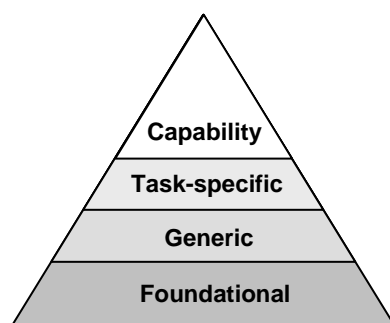


Figure 2: Hierarchy of Skills

A continuum of competency, ranging from basic to highly skilled, may be found within each of the skills levels. As example, the ability to read and write (a foundational skill) may be measured at various functional levels ranging from an elementary grade level, requiring basic mastery, through to a managerial level, requiring the ability to read and write reports at a much higher level of competency.

1.5 BACKGROUND TO QUALIFICATIONS

1.5.1 The National Qualifications Framework

The national skills development framework promotes accreditation and develops opportunities for certificated training courses that will promote career options and opportunities as well as providing opportunities for retraining and re-deployment.

The framework provides a qualifications pathway whereby qualifications obtained at one level of the National Qualifications Framework (NQF) level, allows entry into appropriate training courses in the next level. It also makes provision for the attainment of qualifications in the General as well as Further Education and Training (GET and FET) bands through the submission of Portfolios of Evidence (PoE), providing proof that specific competencies have been attained.

The GET Level 1 of the NQF is a key stage within the learning pathway. It provides the opportunity for under-educated people with limited formal education to move from Adult Basic Education and Training (ABET) and gain access to the Further Education and Training (FET). FET in and of itself becomes the bridge to accessing higher education opportunities within the Higher Education and Training band (NQF levels 5 – 8).

The following provides a graphic representation of where various qualifications fit into the NQF.

| HIGHER EDUCATION AND TRAINING BAND | |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NQF LEVEL | QUALIFICATION TYPE |
| 8 | ❖ Post-doctoral research degrees ❖ Doctorates ❖ Masters degrees ❖ Professional Qualifications ❖ Honours degrees ❖ National first degrees ❖ Higher diplomas ❖ National diplomas ❖ National certificates |
| 7 | |
| 6 | |
| 5 | |
| | |
| | |
| | |
| FURTHER EDUCATION AND TRAINING BAND | |
| NQF LEVEL | QUALIFICATION TYPE |
| 4 | ❖ National certificates |
| 3 | |
| 2 | |
| GENERAL EDUCATION AND TRAINING BAND | |
| NQF LEVEL | QUALIFICATION TYPE |
| 1 | ❖ Grade 9/ABET Level 4 ❖ National certificates |

Figure 3: National Qualifications Framework and Training Courses

As a rule, universities focus on the provision of education and training at NQF Levels 6 and up within the HET band, while Universities of Technology provide training across the FET and HET bands (Level 2 up). Private training service providers usually focus on the provision of training and education up to and including NQF Level 5. The accreditation of programmes or qualifications offered by higher education institutions is undertaken by the Council on Higher Education (CHE), while FET programmes or qualifications are accredited by the Council for Quality Assurance in General and Further Education and Training (Umalusi).

1.5.2 Building blocks of qualifications

Non-degree qualifications are available within all three the GET, FET and HET bands of the NQF in the form of Outcomes-based Diplomas and Certificates. Qualifications are registered according to the total numbers of credits required for completion.

National Certificates may be registered from NQF Levels 1 to 8 and require at least 120 credits, which are specified in the Unit Standards (US) that make up the course. National Diplomas are registered from NQF Level 5 and up and require a minimum of 240 credits. National First Degrees are from Level 6 or above and require a minimum of 360 credits.

The qualifications framework makes provision for the achievement of partial qualifications that address specific needs in a sector through the attainment of Employable Skills Units (ESUs). Each ESU is comprised of a number of Unit Standard-based credits, specifically selected to address certain areas of competency necessary within the workplace.

The following figure provides a graphic overview of the 'building blocks' that make up a qualification.

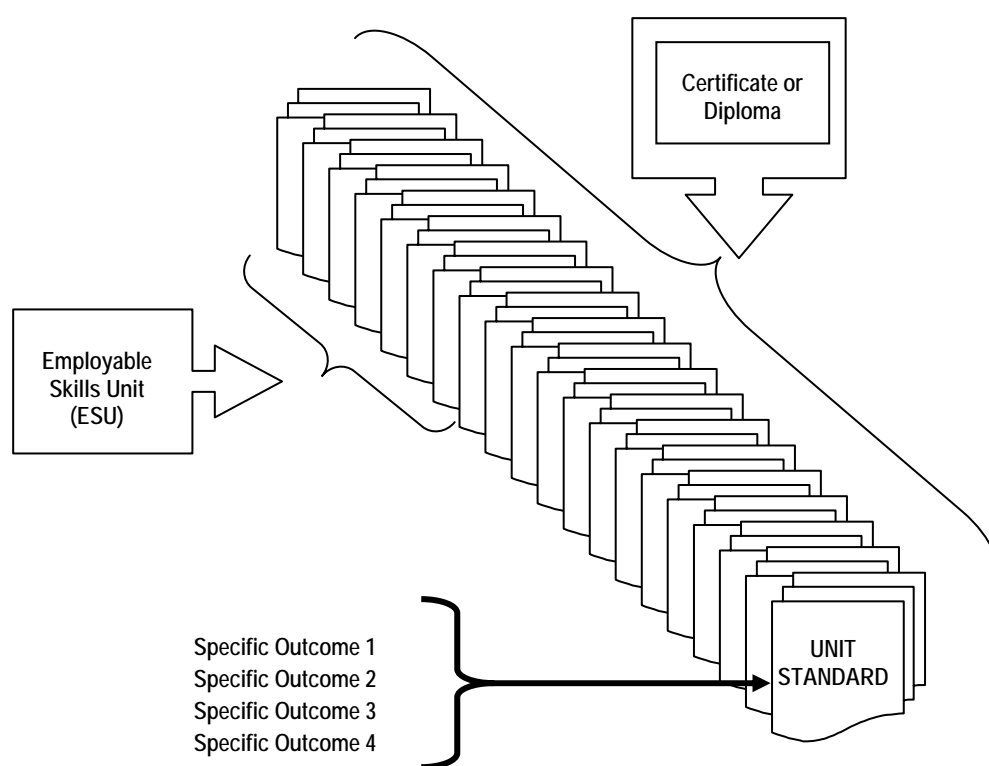


Figure 4: “The Pieces of the Puzzle” - How Specific Outcomes, Unit Standards, Certificate Qualifications and Employable Skills Units Fit Together

1.6 METHODOLOGY

The methodology followed for this study involved a desktop review of relevant policies, legislation, strategic documents and available reports on studies undertaken on capacity building and training for the local government sector. In addition an assessment of capacity building initiatives undertaken by the different sector partners was done to identify good practice. Interviews were also conducted with selected stakeholders such as Department of Water Affairs and Forestry, Department of Provincial and Local Government, South African Local Government Association and the Development Bank of Southern Africa.

1.7 LIMITATIONS OF THE STUDY

Limited data has been obtained regarding the numbers of students qualifying for courses and the training institution assessment of the career choices they believed would be available to graduates. As well, limited confirmation could be obtained regarding the training interventions supported by donor organisations in a number of instances.

A common shortcoming shared by many of the documents that were reviewed is the fact that they tend to have an inward-looking focus – in other words, they refer to other documents and reports, which in turn refer to other documents. Only a relatively small proportion of documents report on primary data collected from water services sector institutions. Data on municipal functioning that were retrieved from the worldwide web, on the other hand, suffer from the opposite shortcoming: these data are based on self-assessments by municipalities. Municipal self-reporting may exclude salient aspects of functioning and should be treated with a degree of caution.

CHAPTER 2: POLICY AND LEGISLATIVE CONTEXT

2.1 INTRODUCTION

Since the democratic government took over in 1994, several policies and pieces of legislation have been put in place to create an enabling environment for the development of the skills and human resources necessary to implement government's policies. Several institutions have been put in place to address the skills shortage in all spheres of government, industry, business and the services delivery sector. However, in spite of the enabling policy and legislative environment, the country is still faced with skills shortages especially in the science, engineering and technology arena. The skills shortages threaten sustainable delivery of services to the people of South Africa.

The responsibilities of a WSA extend beyond the governance and provision of water services. It also has to ensure that all its functions are performed in such a way as to conform to certain *general principles and priorities for governance* that are enshrined in the Constitution and other legislation. The most pertinent of these principles and priorities are local economic development, stakeholder participation, gender mainstreaming, co-operative governance and the Batho Pele principles.

It is vital that these overarching imperatives are taken into account when stipulating the skills requirements of the water services sector, as these are relevant to all organisational levels. At the level of leadership and management, for instance, knowledge of these imperatives is required in order to formulate *strategies* for their incorporation in the governance and provision of water services. At a technical level, skills for the practical implementation of these principles are required, as are attitudes characterised by an appreciation of their importance.

2.2 GUIDING DOCUMENTS

The following table provides a brief overview of policies, legislation and strategic documents that should guide skills development and training for the water sector and the local government sector.

Table 1: Guiding Documents for Skills Development

| | |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>White Paper on Public Service Training</i> | The White Paper provides a national strategic framework on training and education for public servants and contributes to the transformation of public service |
| <i>White Paper on Local Government (1998)</i> | The White Paper recognizes the importance of skills development in ensuring that municipalities acquire the necessary capacity to deliver basic services to communities. |
| <i>National Water Policy 1997</i> | The Policy emphasizes the importance of training and development of skilled personnel in the achievement of efficient water resource management. |
| <i>SAQ Act (1995)</i> | This Act creates a single unified system for education and training qualifications in South Africa. |
| <i>Skills Development Act (1998)</i> | The Act aims to improve delivery of social services by providing employees with skills necessary to deliver social services effectively. Its purpose is to develop skills for the workplace and promote employment prospects for all citizens. |
| <i>Skills Development Levies Act (1999)</i> | This Act makes provision for the funding of the skills development programmes. |

| | |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>The Municipal Systems Act (2000)</i> | The Act requires that a municipality must develop its human resource capacity to a level that enables it to perform its functions and exercise its powers in an economical, effective, efficient and acceptable way. For this purpose, it must comply with the Skills Development Act and the Skills Development Levies Act. It spells out the capacity required to ensure that the municipality can meet its constitutional obligations and it also stipulates that a person appointed as a municipal manager must have the appropriate skills and expertise necessary to perform duties associated with this position. |
| <i>National Skills Development Strategy 2005-2010</i> | The Strategy articulates a vision for skills development in support of sustainable growth, development and equity. |
| <i>Strategic Framework for Water Services (2003)</i> | The Framework aims to develop adequate skills and competencies required in the water services sector. |
| <i>LGWSETA Sector Skills Plan 2003-2005</i> | This plan addresses the main internal and external factors that impact on local government and the water sector including the shortage of skills faced by the water services sector. |
| <i>National Capacity Building Framework for Local Government</i> | This framework aims to build on the foundation of ongoing capacity development undertaken by sector partners in order to improve coordination of capacity building in the local government sector. |

2.3 ROLES & FUNCTIONS RELATED TO CAPACITY DEVELOPMENT

The following mandated roles and functions may be distinguished with regard to capacity building and skills development in the sector:

- ❖ **Overall responsibility for skills development, training and capacity building.** The Department of Provincial and Local Government (DPLG) bears the overall responsibility for local government capacity building. The Department of Water Affairs and Forestry (DWAF) is responsible for defining the skills development and training requirements of the water services sector, and the South African Local Government Association (SALGA) is responsible for councillor training. The Local Government Sector Education and Training Authority (LGSETA) is responsible for ensuring that effective skills development and training take place in the local government sector, while the Energy Sector Education and Training Authority (ESETA) performs an analogous role for the energy and water sectors;
- ❖ **Coordination of skills development, training and capacity building initiatives.** DWAF, together with the ESETA and LGSETA, are to play a leadership role by providing such coordination at a national level. District Municipalities, in turn, are required to ensure inter-departmental coordination regarding regional and local support;
- ❖ **Workplace Skills Plans.** Local and District Municipalities and water-related enterprises (such as Water Boards) are required to identify their organisations' skills needs with the help of a Skills Development Facilitator, who is assisted by a training committee. These skills needs are to be recorded in a Workplace Skills Plan, which is submitted to the LGSETA on an annual basis. The LGSETA evaluates these Workplace Skills Plans to identify training needs in the sector, and prepares an annual Sector Skills Plan. Currently, the LGSETA presents all information relevant to water and sanitation related functions to the Water Chamber of the ESETA for inclusion in the Energy and Water Sector Skills Plan. The Department of Labour endorses the Sector Skills Plans submitted by the various SETAs;
- ❖ **Capacity Building Business Plans.** District and Local Municipalities are also required to identify their skills development and training needs in annual Capacity Building Business Plans, which are submitted to DPLG for assessment and approval. DPLG also ensures

that skills audits are undertaken in the sector. National and Provincial government are required to synthesise Capacity Building Business Plans at provincial and national levels;

- ❖ **Responsibility for the development and accreditation of appropriate curricula and training material** is shared by DWAF (which promotes the development of water-related training material), the ESETA and the LGSETA (which conduct the registration of existing training courses, and also oversee the development of unit standards and certificate and skills courses); and the Department of Education (which underwrites National Certificates awarded by Technical Colleges).
- ❖ **Availability of sufficient accredited training providers, institutions and facilitators.** The central role-players in this area are the LGSETA and ESETA. These SETAs submit Learnerships to the Department of Labour for registration, register learnership agreements, identify training organisations within the sector, and support these organisations through the accreditation process. DWAF also plays a role by establishing links with education institutions offering water-related training.
- ❖ **Funding and budgets for skills development and training.** DPLG has overall responsibility for the allocation of funds for local government capacity building. The Department of Labour, on the other hand, collects Skills Development Levies, manages and oversees the distribution of the National Skills Fund (a 20% portion of Skills Development levies), and allocates grants to employers, education and training providers and workers. The LGSETA disburses Skills Development Levies and develops appropriate criteria for discretionary grants to promote skills development in the sector.
- ❖ **Monitoring and evaluation of skills development and training.** This responsibility is shared by DPLG, the LGSETA and ESETA (which also moderate learner achievements) and the Department of Education (which reports on the supply-side characteristics of Education and Training system, especially across the Further and Higher Education and Training bands).
- ❖ **Ensuring that skills development and training are translated into improved organisational performance.** DWAF, DPLG and SALGA share the responsibility of ensuring the effective functioning of District and Local Municipalities by providing guidelines for Water Services Authorities. District and Local Municipalities, in turn, have a responsibility for providing mentoring and support to their employees. The responsibility for ensuring the retention of skills and providing incentives for improved employee performance are shared by DPLG and District/ Local Municipalities.
- ❖ **Provision of strategic support for Local Authorities.** DWAF is required to provide strategic support for Water Services Authorities and Water Services Providers, while DPLG has a responsibility towards municipalities in general in terms of exploring means of compensating for a lack of municipal capacity on a short-term basis. SALGA is to support Local and District Municipalities in addressing the implications of the division of powers and functions. District Municipalities are to provide technical and administrative assistance to Local Municipalities, while Water Boards play an important role in providing such assistance to both Local and District Municipalities.

2.4 ANALYSIS OF THE POLICY AND LEGISLATIVE ENVIRONMENT

2.4.1 Broader HR Development context

Efforts to strengthen the capacity of water services sector institutions form part of the larger prioritised national Human Resource Development (HRD) initiative and should, therefore, ensure synergy with other current and planned programmes. Existing initiatives at national level include:

- ❖ The Accelerated and Shared Growth Initiative of South Africa (ASGISA) and Cabinet prioritization of human resources development;
- ❖ The Joint Initiative for Priority Skills Acquisition (JIPSA), which forms part of ASGISA and aims to identify and address priority areas where skills deficits threaten economic growth;

- ❖ The National Plan for Higher Education;
- ❖ The Umsobomvu Youth Fund Skills Development Programme;
- ❖ The 2025 Vision;
- ❖ The Water Services Sector Support Strategy;
- ❖ Project Consolidate/ Siyeza Manje; and
- ❖ The Draft Government Programme of Action 2006 (which calls for a review of the public service HR development strategy and the implementation of a national local government skills development audit, and contains targets such as the finalisation of the local government competency framework by DPLG by July 2006).

Furthermore, there are a number of institutions, government departments and statutory bodies that are responsible for training and capacity building in the local government and water services sector. These need to work together in order to avoid duplication and fragmentation of efforts. This will require that policies and strategies are fully aligned and that interrelationships between various role-players are strategically joined up and managed during implementation.

2.4.2 Enabling policy and legislative environment

The review of the policy and legislation pertaining to skills development and training shows that the government has put in place a sound enabling policy environment to support skills development and training in the country. The Skills Development Levy Act is an effective instrument for collecting the funding necessary to finance skills development and training in both public and private sector. However, it is unclear how effective the disbursement of the fund is in terms of skills development and training programmes in the water sector. In addition, the sector derives relatively low levels of levy income when compared with other sectors, which impacts on the amount of funding available for training within the sector.

2.4.3 Skills development strategies

The Department of Labour has put in place an essentially sound National Skills Development Strategy that articulates objectives and outcomes of skills development and training for meeting the services delivery targets. A budget of R 21.9 billion has been allocated to fund the implementation of the strategy over five years (2005-2010). Achievement of the objectives of the strategy would depend on a good implementation plan and better mechanisms for optimising skills development needed to achieve the social and economic goals of the country. The weakness of the national skills development strategy relates to the fact that it lacks an implementation plan, adequate mechanisms for linking in and ensuring that all government departments perform cooperatively towards the achievement of objectives. As well, no monitoring and evaluation (M&E) systems are in place to assess progress in achieving the skills development targets that are set out.

CHAPTER 3: REVIEW OF CURRENT STATE OF CAPACITY BUILDING IN THE LOCAL GOVERNMENT SECTOR

3.1 INTRODUCTION

This Chapter addresses the findings of Output 1 of the Project, which involved the compilation of a compendium of studies relevant to providing an understanding of the skills required for ensuring water supply and sanitation services delivery on the one hand and water resources management and research capacity on the other hand. This compendium focuses on the review of available information derived from reports published within the past five years, interviews with key stakeholders, parliamentary briefings and the worldwide web.

3.2 SUMMARY OF DOCUMENTS REVIEWED

A range of documents addressing capacity building and training for the water services sector and municipalities was reviewed in order to assess the current state of capacity building and training within the local government sector. A summary of the documents reviewed is provided in the following table. A detailed status review report is attached as **Appendix 1**.

Table 2: Summary of document review

| Title | Authors | Brief description |
|---------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Local Government: Moving from training to skills development (undated) | Brown, L | The article evaluates the implementation of skills development policies and practices within municipalities and made recommendations for addressing skills development in municipalities |
| Local Government skills audit: Review of existing data and reports 2005 | Kitchin, F and Ovens, W | This report reviewed documents on skills and capacity assessment for local government and concluded that most reports focused on capacity of municipalities and limited attention was paid to individual skills of employees; emphasis was put on numbers without linking these to qualifications of individuals and the match between qualifications and job requirements was also not considered. |
| Project "Gear-up" - Strategic assessment of sanitation related capacity needs of Water Services Authorities 2005 | Schoeman, G and Berry, S | This study found that a lack of skills and capacity at municipal level was responsible for poor progress in the delivery of sanitation services. The report identified specific areas of skills shortage as well as strategic interventions required to address the situation. |
| South Africa's Progress Report on Water and Sanitation presented to the 12 th session of the UNCSO, 2004 | DWAF | The report presented progress achieved by South Africa in the implementation of integrated approaches to the development and management of water resources and the provision of water supply and sanitation. It highlighted lack of human resource capacity as one of the constraints to the implementation of the National Water Act. |

| | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Numbers & Needs: Addressing imbalances in the civil engineering profession 2005 | Lawless, A | The report highlighted the shortage of civil engineering professionals and made recommendations for interventions necessary for addressing the shortage of engineering professionals. |
| Water and Sanitation Sector Report 2002 | Municipal Demarcation Board | The report identified skills required to enable the WSAs to perform their governance and service provision functions. |
| Strategic options to address constraints and challenges to skills development in the water services sector, Main Report, 2005 | Schoeman G, Perold J, Vermeulen L & Williams S | This Report provides an overview of the functions to be performed by WSAs and WSPs, skills deficits and constraints to skills development for the water services sector |
| Realising the Macro Strategy: Promotion of water services delivery through skills development, 2005 | Schoeman G, Perold J, Vermeulen L & Williams S | The report presented strategic interventions that are required to address the constraints and challenges to water related skills development. The following key focus areas are recommended: effective skills development and training; creation of an enabling institutional environment for effective skills development and training and translation of skills development into improved organizational performance |
| Analysis of skills gaps in the water services sector, 2004 | Schoeman G, Williams S, & Perold J | The report made a distinction between three types of skills, namely, foundational, generic and task-specific skills. It identified skills gaps in respect of the different categories of skill types within the water services sector. |
| ESETA Water Chamber scarce skills workshop report, 2005 | JCP International – Organisational performance specialists | The report provided a list of critical and scarce skills that were identified by sector stakeholders in a consultative workshop. |
| Skills gap analysis for local authorities 2004 | DBSA-Wits Enterprise | This study assessed skills gaps in the local authority sector as part of a process of identifying niche training areas for DBSA-Vulindlela Academy. The study found that there was no shortage of training providers but the problem was quality and appropriateness of the training provided. |
| Lessons learned from EU NGO programme of local government capacity support project, 2002 | The Mvula Trust | The Mvula Trust, based on its experience in training and capacity building for WSA, has made the following recommendations: there is a need for training to be evaluated against clear objectives and outcomes rather than the number of training sessions; Councillors must be provided with a working knowledge of policy and legal framework for water services delivery; and training courses and methodology need to be approved by LGSETA |
| Training and capacity building for water services provision: The Mvula Partnership Approach | The Mvula Trust | The report highlighted lessons learned by the Mvula Trust in implementation of its partnership approach to capacity building and training for water services provision. |

| | | |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Local Government - Local governance and sustainable development 2002 | Atkinson, D – Integrated Rural and Regional Development Research Programme, Occasional Paper 4, HSRC | This paper noted achievements which have provided the building-blocks for a development-oriented system of government and governance. It concluded that there was still a need for national and provincial departments to strengthen the municipal development capacity, especially in areas of entrepreneurship, development and environmental management. |
| A Joint National Sector Support Strategy for Water Services, draft 2 2005 | DWAF, DPLG, National Treasury, SALGA & ESETA | This strategy focuses on institutional support for WSAs. It does not address individual capacity issues. |

3.3 REVIEW FINDINGS

3.3.1 *Factors contributing to personnel shortages in the water services sector*

Very limited research has been undertaken to establish what the exact skilled personnel shortages are within specific occupational categories (a key role currently envisaged for JIPSA). However, the following factors, which have played a role in the current skills shortage, should be considered in strategies to address skills development for the water services sector:

a) *Rapid economic growth*

The rapid economic growth within South Africa has been responsible for an increased demand for a skilled resource base, especially in respect of the fields of engineering, technology and artisans. It is expected that demand in the private sector will continue to outstrip supply. In the consulting sector, for example, average capacity utilisation in any given practice is now over 90%. Over 80 % of the consulting practices are seeking experienced engineers. In terms of equity goals, all are searching for black engineers. Of these practices, 50% are also looking for technicians and technologists (Lawless, 2005).

From a general skills perspective, it is estimated that there are in the order of 300 000 vacant posts within the South African economy that cannot be filled as a result of the lack of sufficient skilled personnel. As an example, SAICE (Lawless, 2005) has estimated that approximately 4 000 engineers will be required for the implementation of infrastructure development projects in the short to medium term. A significant proportion of these numbers will be required within the private sector. This demand will continue to hamper efforts to ensure a sufficient skills base within the public sector. Therefore, in addition to national efforts to increase the existing skilled resource base, specific interventions will be required to attract and retain the necessary skilled manpower within municipalities.

b) *Transformation of Human Resources*

The essential transformation to meet the requirements of the Employment Equity Act has led to a significant decline in the number of older, more experienced technical and managerial personnel between 1994 and 2000. This was, largely, due to early retirement or resignations. At the same time, in the order of 30% of the total outflow of personnel during the 2002 to 2003 period was due to death or illness of incumbents.

c) *The skills drain*

The current municipal skills shortage has been significantly aggravated by the loss of a trained and experienced cadre of engineers, technicians and technologists as a result of emigration, unsatisfactory working conditions accompanied by low salaries within the public sector as well as the pressure for transformation and meeting of equity targets. While initially deemed to pose a serious threat to the existing resource base, the AIDS pandemic appears not to have had as devastating an impact within this context as had initially been feared.

d) *Skewed Municipal Skills Base*

Municipal Workplace Skills Plans (WSPs) confirm that there have been high levels of skills outflow at NQF Levels 4, 5 and 6. Of concern is the fact that it is clear that municipalities are faced with difficulties in skills replacement at the same NQF levels through recruitment and/or skills development. This is confirmed by the fact that there has been a relative increase in the numbers of people employed at NQF Levels 1 and 2, with almost 50% of municipal employees being found in the unskilled (43%) and semi-skilled (6%) categories. During the 2002 – 2003 period only an 8% component of municipal personnel was made up of technical and professional staff.

3.3.2 *Factors contributing to skills shortages in the water services sector*

From the review, the following factors that impact negatively on the **existing** skills of Water Services Authorities and their ability to deliver water services were identified:

a) *Changes in the local government legislation*

The significant changes in the regulatory functioning of municipalities over the last decade have necessitated the acquisition of new skills sets by technical and managerial staff. In addition, the new approach to service delivery that requires extensive stakeholder participation in integrated development planning (e.g. participative planning, rural and peri-urban sanitation and water supply, health and hygiene, etc.) presents a need for the creation of new positions with associated new skills requirements within municipalities.

b) *The Municipal demarcation process (2000)*

This process generated massive spatial and organisational restructuring which required geographical integration of financial, administrative, staffing and delivery systems. In addition, service delivery backlogs have had to be consolidated, new areas of delivery have been created and the transfer of assets has taken place. Management of the integrated systems require new skills

c) *South Africa's human capital base*

A country's literacy rates are frequently regarded as a crucial measure of its human capital – the economic value of an employee's skill set - due to the fact that the costs attached to training literate persons is significantly less expensive than that for illiterate people. As the level of education, abilities and experience of an employee have an economic value for employers and for the economy as a whole, literacy increases job opportunities. In addition, it is a prerequisite for access to higher education.

It is estimated that in the order of five million people in South Africa are totally illiterate and one in three South Africans over the age of 20 has either had no schooling whatsoever, or has not completed primary school. In its report entitled "The Human Development Index" (2005), the United Nations Development Programme (UNDP) places South Africa 112th out of 177 countries and ranked 65th overall in respect of the attainment of literacy. The national functional literacy level (equivalent to the reading and writing skills of a nine year old child) is rated at 82.45%.

Of particular concern, is the fact that there appears to have been no perceptible improvement in this situation over the past five years. The situation is severely exacerbated by the fact that the ability to read and write of a significant proportion of current scholars is so severely compromised as to negatively impact on their school success.

These factors have an obvious and significantly negative impact on the numbers of potential candidates who are sufficiently qualified to enter tertiary education.

d) *Poor quality of science and mathematics education at high school level*

The Lawless Report (2005) highlighted poor performance of matriculants in mathematics and science as an underlying cause of the shortage of engineering professionals because this limits the pool of students who meet the entry requirements of engineering and science faculties. It is worth

noting that the Department of Education has initiated the Dinaledi schools programme for improving mathematics and science education. This programme was initially started in 102 schools and is being extended to 400 schools during 2006, with an additional target of 529 schools having been set for 2007. The Dinaledi schools are dedicated to teaching mathematics, science and technology. If successful, this programme will go a long way towards addressing the shortage of students who meet the entry requirements for science and engineering faculties. The challenge for the water services sector is to develop effective awareness campaigns and incentives for attracting students to follow careers in water field.

e) Learnerships in water supply and sanitation

The DBSA-Wits Enterprise study (2004) identified the shortage of technical skills as a serious threat to service delivery and proper O&M of municipal infrastructure. The study identified the following shortcomings in technical training:

- ❖ Focus of training on the low level technical training – Most private and public sector training providers are focusing on the lower echelons of technical staff such as plant operators and supervisors and there are limited training courses offered for the higher levels of technical staff.
- ❖ Poor customization of training – training workshops use a one-size-fits-all approach which does not consider the local context faced by the municipal councillors and officials especially in rural municipalities that operate under very difficult conditions of poor institutional and environmental capacity.
- ❖ A shortage of skilled trainers – There is shortage of skilled trainers that can provide good quality technical training that is appropriate to meet the capacity and skills needs of municipal employees.

While the Learnerships that have been developed address some of the shortcomings in the formal qualifications sphere, training provision is not necessarily in place. Where Learnerships have been implemented, these have – in large part - been undertaken as pilot projects with discontinuation in the process resulting from the transfer of qualifications between SETAs.

Given the critical need to fast track the implementation of Learnerships, the lack of goal directed and coherent action towards this end is cause for extreme concern. Within this context, the stop - start approach to Learnership implementation that was evident while the activities of the Water Chamber still resorted under the LGSETA, means that it certainly will not be possible to resolve this problem in the short term. Unless drastic action is taken by the ESETA to ensure fast-tracking of water Learnerships, it is doubtful whether or not this problem will be effectively addressed even in the medium to long term. This includes the need to ensure that discretionary grant funding to cover the full costs of Learnership implementation will be available (and can be sourced without undue delays) for municipalities that have insufficient funding to engage in the implementation of water Learnerships.

Most of the (limited) Learnerships that have been registered by the Water Chamber target the lower end of the municipal hierarchy. The extremely slow progress in respect of ensuring water Learnerships from NQF Level 4 not only affects the number of skilled personnel within the water sector but has a negative effect on potential career path advancements. It is, in practical terms, the equivalent of discontinuing the training of an apprentice after the first year of study and effectively serves to reinforce the current low-skills equilibrium.

In addition to the above, limited attention has been paid to the development of Learnerships for graduates so that they can be better prepared for employment in water services institutions.

f) Delays in the implementation of RPL systems

The ongoing delays in the implementation of accreditation processes and the training and registration of RPL advisors have an extremely negative effect on the ability of the sector to fast-track water related skills development.

Based on estimates by the LGSETA, approximately 43% of municipal workers are employed in basic occupational categories, with an additional 6% serving as semi-skilled workers in occupational categories, such as plant operators. A significant proportion of these workers have

practical experience that, in some instances, spans decades. While they are skilled, they are unqualified due to gaps in their associated theoretical knowledge. Their lack of qualification means that they are relegated to the “unskilled” category whereas they may serve as a potentially significant pool of candidates for fast tracking skills development. While less dramatic from a numbers point of view, the same principle applies to all other skills categories.

No true assessment of the lack of skills in the lower and intermediary skills categories can be undertaken without effective RPL systems being in place.

g) Implementation of Skills Programmes

Allied to the deficits in the implementation of the RPL systems, is the failure to effectively drive the associated implementation of skills programmes. Targeted skills programmes offer an effective mechanism to ensure that experienced workers, with partial skills, can be upgraded to fully skilled artisans.

h) Changes in the institutional arrangements for the Water Chamber

A number of factors negatively impact on initiatives to promote effective skills development at municipal level. These include the following:

- ❖ The LGWSETA (now the LGSETA) which served as the Sector Education and Training Authority tasked with ensuring the adequate development of skills within municipal sector has, itself, been involved in a transformation process.
- ❖ The Water Chamber was transferred to the Energy SETA during 2005. Considerable delays have been experienced in the transformation process with key MoUs for ensuring effective delivery of skills development and coordination between the LGSETA and the ESETA apparently still unsigned. Delays in this regard have hampered both the smooth transition that had been hoped for as well as the increases in performance that had been expected as a result of change in the institutional arrangements for the Water Chamber.
- ❖ The LGSETA has a limited income stream: this negatively impacts on its ability to fund skills development on a large scale, which is required to address the critical skills shortages experienced by most municipalities. It is still unclear whether any agreement has been reached between the LGSETA and the ESETA regarding the transfer of funds from the LGSETA to the ESETA in respect of the Water Chamber's skills levy share emanating from the LGSETA levy income.
- ❖ The Water Chamber has suffered from a lack of adequate human and financial resources to deliver on its mandate of supporting and coordinating skills development for the water sector. Unfortunately, this situation appears not to have changed significantly since its consolidation with the ESETA.
- ❖ Private Providers of Education, Training and Development (PPETD), who offer water and sanitation-related training, including Learnerships, had previously qualified for accreditation with the LGSETA. All these institutions have been compelled to change accreditation to the ESETA. At the same time, the ESETA has issued an injunction that service providers, not yet accredited with them, may not be engaged for any water and sanitation related training. However, there have been significant delays in the re-accreditation process that effectively prevents highly competent training providers from providing training in the field.

i) Poor coordination of skills development

The large number of programmes and entities affiliated with water sector-related institutions creates a risk of overlapping mandates, duplication and fragmentation of efforts. Significant and goal-directed efforts are required, as absolute **essential prerequisite**, to ensure better cooperation and coordination of activities between all role-players. There is a need to identify opportunities for simplifying, streamlining and harmonizing procedures and practices and to ensure that skills development initiatives are designed to form part of appropriate and sustainable institutional development programmes.

CHAPTER 4: WSA & WSP TRAINING PROGRAMMES

4.1 INTRODUCTION

This Chapter addresses the findings of Output 2 of the Project, which involved the compilation of an inventory of training including degree/diploma courses (setting out a brief summary of curriculum per course) offered by public and private sector training institutions targeting the needs of water services delivery.

The extent to which a skills base for water services delivery can be promoted is dependent on the availability of suitable training courses, materials and training service providers. A particular focus of the project was the identification of the extent of the existing training resource base and aimed at an assessment of the past and current municipal capacity building initiatives initiated by public sector institutions either singly, or in partnership with donor organisations in the first instance and the training courses offered by Further and Higher Education institutions in the second instance, This includes undergraduate and post-graduate courses provided by Universities.

4.2 PUBLIC SECTOR CAPACITY BUILDING INITIATIVES

4.2.1 Initiatives Identified

Table 3 below provides a summarised review of the capacity building initiatives, previously or currently being implemented by public sector institutions and donor organisations aimed at addressing the skills and capacity gaps in municipalities.

Table 3: Public Sector Capacity Building Programmes and Projects

| Responsible institution | Initiative | Brief description |
|-------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| USAID | District Learning Network (DLN) | The DLN is comprised of 16 municipalities from 9 provinces. Its aim was to build the leadership and managerial capability of local government officials and councillors. Several mayors championed the network and contributed to its success. |
| WRC | Learning network for District Municipality Water Services Managers | The network provides water services managers with a forum for sharing their experiences and challenges they face in the delivery of water services. |
| DPLG | Local Government Leadership Academy (LOGOLA) | The objective of LOGOLA is the development of a broad base of politically mature leadership: it focuses on emotional intelligence, communication, problem-solving and knowledge management. |
| DPLG | Project Consolidate | Project Consolidate emphasis the provision of hands-on support to local government by national and provincial government for a period of two years. Municipalities learn by doing under the guidance of a team of experts. |
| DPLG | Municipal Support Programmes | DPLG has several programmes that addresses the capacity challenges of municipalities, for example, the Capacity Assessment Tool (CAT) which is a web based tool for helping municipal managers assess their individual capacity gaps. The tool is still in a pilot phase. |

Capacity Needs for the Water Services Sector

| | | |
|------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DWAF | Learnerships for plant supervisors and operators | DWAF is implementing water Learnerships in Limpopo and Mpumalanga province for their plant operators and supervisors to prepare them for transfer to the WSAs. |
| DBSA | DBSA Vulindlela Academy | The DBSA has established the Vulindlela Academy which focuses on building capacity of its internal clients and local authorities. The academy is focusing on improving the capacity of municipalities to deliver services. It is accredited by LGSETA as a training provider for the Local Government. |
| DBSA | Local Government Resource Centre (LGRC) and Local Government Network (LGNet) | <p>LGRC has been established as a one-stop support centre for municipalities that will empower municipal professionals and councillors and form a gateway to local government knowledge. LGRC has been established as a partnership initiative between DBSA, DPLG and SALGA.</p> <p>LGNet is intended as a virtual private network that will link all local government stakeholders into an e-community. The network will provide basic ICT services to all spheres of local government so that they can all participate and it facilitates online collaboration and communication amongst local government stakeholders. To date 177 municipalities have been connected to the LGNet.</p> |
| InWEnt, DWAF & Constraint Management Training | Amanzi Programme | The programme is a joint venture between InWEnt, DWAF and Constraint Management Training. It provides hands-on training and mentorship to municipal councillors and officials in the elements of capability, including logical thinking skills, planning and constraint management. The one year training course is aimed at ensuring significant improvements in water and sanitation services delivery based on the practical development of intervention strategies that address in situ constraints and problems. |
| Northern Cape – Department of Housing and Local Government | The Northern Cape Operation & Maintenance Project | This O&M project is a partnership between DHLG, DWAF, SALGA, DBSA, SIDA and Frances Baard District Municipality: its aim is to strengthen the capacity of municipalities in the NC province to provide good quality water services through the improvement of O&M. |
| SALGA | Skills development and capacity building initiative 2006-2011 | This initiative targets Councillors, Ward Committees, traditional leaders and community members with training necessary to build their capacity to deliver services. |
| SALGA, DWAF & WRC | National benchmarking initiative 2005-2007 | This is a joint initiative by SALGA, DWAF and WRC with a goal of promoting improved performance of water services providers |
| National Dept of Public Works | Expanded Public Works Programme | EPWP is a short-to-medium term government programme aimed at the provision of job opportunities coupled with accredited training for unemployed people, especially youth. |
| Department of Education | Dinaledi schools for science and mathematics | The Department of Education has established a Trust fund for supporting 102 Dinaledi schools with mathematics and science education. An additional 400 schools have been identified for support under the science and mathematics improvement project to be launched in 2006 and the number of schools on the Dinaledi programme will increase to 529 in 2007. |

| | | |
|------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| eThekwini Municipality | Siyaya learnership programme | eThekwini has launched the Siyaya learnership programme for training 1000 unemployed graduates. The programme is a joint venture between eThekwini Municipality and the LGSETA. It aims to give unemployed graduates a year of practical experience in a variety of fields. It is not employment orientated but serves to prepare graduates for entering the job market. The following learnerships that are relevant to the water services sector are part of the programme: audit technician, project management, water reticulation and customer service management. |
| EU | Multi-Annual indicative Programme | This programme aims at improving the quality of the Further Education and Training bands of the National Qualifications Framework. The programme anticipates, and responds to, specific and emerging skills needs through public and private sector participation with an emphasis on skills development |
| EU | Labour Market Skills Development Programme (LMSDP), | The Programme actively supported the development of the second National Skills Development Strategy for the period 2005 to 2010. It further provided support to the Department of Labour in the roll-out of the Employment and Skills Development Services Learnership during 2004. |
| SAICE | Engineering Mentorship Programme | The Programme aims at the provision of mentorship support within municipalities on a contracted basis. Experienced registered engineers provide backstopping and mentoring services and support to less experienced engineers or, in their absence, direct engagement in municipal functions. |
| USAID | NGO-led Programme | USAID began funding an NGO-led programme in 14 local municipalities that targets the leaders of community-based NGOs. The leaders are trained in how their local council works, and on the avenues provided for participation in their local council's budgeting, planning and procurement processes. |
| GTZ | Local Governance Support Programme | Key Priority areas of support are programmes for (i) Strengthening Local Governance; (ii) Municipal Finance Management Capacity Building; (iii) Training and Support for Resource Management (TRANSFORM), which involves the promotion of sustainable management of natural resources at municipal level; and (iv) Business development services and Local Economic Development (BDS/LED). |
| SIDA | Twin town cooperation between municipalities | The programme aims at promoting learning through cooperation and twinning of stronger and weaker municipalities as a mechanism for exchanging knowledge and building capacity. |

4.2.2 Overview of the public sector capacity building initiatives

From the review of the capacity building initiatives, the following good practices can be highlighted:

a) Task-specific skills development

A significant proportion of capacity building initiatives have aimed at bridging the gap that exists between generic and task-specific municipal skills. In particular, support has been provided to promote the ability of municipal role-players to meet the changing regulatory requirements.

b) Capacity Building partnerships

There are a few good examples of capacity building partnerships between municipalities and tertiary institutions (eThekwini and City of Johannesburg). DBSA Vulindlela Academy is also building strong partnerships with several universities that offer accredited training to their local government clients. The National Department of Public Works and the Construction Education and Training Authority (CETA) have been successful in forming partnerships with several institutions that are supporting the skills development for beneficiaries of the Expanded Public Works Programme.

The Municipal Training and Development Institute (MTI) of the Northern Cape could potentially offer a unique model for building the capacity of municipal officials. In this case, the municipalities in partnership with the sector partners (SALGA and DHLG) have established a provincial training institute for all municipalities in the province. It is intended that the training will be demand driven and course material is developed in consultation with the stakeholders.

c) DBSA Local Government Resource Centre and LGNet

The Local Government Resource Centre (LGRC) is a DBSA initiative that has been developed in partnership with SALGA, DPLG and other local government stakeholders. Its aim is build the capacity of municipalities so that they can met the challenges they face in performing their developmental roles and service delivery.

LGRC provides a wide range of services to municipalities and targets senior managers and councillors; approximately 5000 users are linked to LGRC. The following types of services are provided:

- ❖ Support materials such as the Municipal professional toolbox which provides municipalities with 'how to' manuals and guidelines;
- ❖ Document Bank – source of information for important documents and legislation library, targeting municipalities from national, provincial and district municipalities,
- ❖ E-government resources – all forms can be downloaded from LGRC
- ❖ Municipal problem solver – covers all the Key Focus Areas (KFAs) of municipalities
- ❖ Chat room – enables direct communication between municipalities and role players;
- ❖ Links – to websites that have information relevant to the needs of municipalities;
- ❖ Muni-expert - a panel of LG specialists has been established. Experts respond to queries from municipalities within 48 hours; and
- ❖ Muni-mail – facilitates electronic communication with municipalities.

To address the challenge of computer illiteracy in municipalities, the DBSA is providing free accredited training to all the users who are computer illiterate.

d) Project Consolidate

Project Consolidate represents the most concerted, comprehensive effort to date to build capacity at local government level. However, despite the fact that the activities of Project Consolidate are premised on the understanding that it will offer solutions to the main problems and constraints to priority municipalities, it does not – as yet - offer goal directed interventions to ensure comprehensive skills development. Neither does existing documentation make it clear what the specific role is that DPLG will be expected to play in ensuring that skills development and training initiatives are aligned to national and sector priorities.

Despite this, initiatives aimed at promoting skills development at local level will need to ensure alignment with the overarching imperatives that Project Consolidate aims to address. These include the stated aims of the project to build *institutional capacity* by establishing appropriate systems (including systems for combating corruption), expanding human resources and improving organisational culture.

e) Improvement of the quality of Mathematics and Science in high schools

The Department of Education has established a Trust fund to support 102 Dinaledi schools in mathematics and science education. An additional 400 schools have been identified for support under the science and mathematics improvement project to be launched in 2006. The Department has made a commitment to pay science and mathematics teachers more money in order to retain them in the school system. If successful, this initiative will go a long way towards increasing the pool of matric students that meet the entry requirements for science and engineering faculties.

4.3 TRAINING PROVISION BY HET & FET INSTITUTIONS

4.3.1 Initiatives that have been identified

This Section of the Report discusses the accredited training courses currently on offer at Universities, Universities of Technology and accredited public and private Further Education and Training (FET) Institutions. As well, information is provided on current Learnerships and short courses offered by relevant institutions such as universities.

The matrix of available training courses (a summary of which is set out in **Appendix 2** to this document) is divided into the following categories:

- ❖ Courses that address task-specific water related skills development, and
- ❖ Courses that address generic water related skills development.

In addition, information is provided in respect of the number of graduates per training course.

4.3.2 Number of Graduates

All Universities and Universities of Technology were requested to provide information regarding the numbers of under- and post-graduate students who had graduated during 2005. The majority of institutions obliged. However, a number have not responded. The following Table sets out the available somewhat limited dataset in this regard.

Table 4: Universities & Universities of Technology graduates in water related fields

| COURSE | 2005 TOTAL NUMBER OF GRADUATES |
|--------------------------------------------|---------------------------------------------------|
| BSC | |
| BSc (undergraduate) | 1598 |
| BSc Hons | 483 (still awaiting reply from some universities) |
| MSc | 429 |
| PhD | 236 |
| CIVIL ENGINEERING | |
| BEng/BSc Civil Engineering (undergraduate) | 80 (still awaiting reply from some universities) |
| MSc in Civil | 12 |
| Meng | 2 |
| PhD | 3 |
| National Diploma in Civil Engineering | 2490 |
| BTech in Civil Engineering | 1113 |
| MTech in Civil Engineering | 2 |
| CHEMICAL ENGINEERING | |
| BEng/BSc chemical engineering | 153 |
| Masters | 95 |
| PhD | 39 |
| NATURE CONSERVATION | |
| National Diploma in Nature Conservation | 129 |
| BTech Nature Conservation | 51 |
| MTech Nature Conservation | 1 |
| MARITIME STUDIES | |
| National Diploma In Maritime Studies | 19 |
| ENVIRONMENTAL HEALTH | |
| National Diploma in Environmental Health | 16 |
| BTech in Environmental Health | 27 |
| MTech in Environmental Health | 3 |
| DTech in Environmental Health | 3 |

| OCEANOGRAPHY | |
|-----------------------------------|----|
| National Diploma in Oceanography | 10 |
| BTech in Oceanography | 2 |
| ENVIRONMENTAL MANAGEMENT | |
| BTech in Environmental Management | 19 |

When the above numbers of graduates are compared with data from other reports³, the downward trend in numbers of students graduating within the appropriate technical fields continues. It is important to note that the escalating demand for technical skills in the private sector will continue to mean that graduates consider employment within the municipal context as last, rather than first option given the disparity in salary scales and the challenges of working within the municipal context. While a Strategy for skills development will need to ensure that greater numbers of students enrol (and qualify) within the technical fields, mechanisms will be required to ensure that municipalities can attract and retain technical competency.

4.3.3 Overview of the available HET & FET courses

From the Summary Matrix (Appendix 2, Sections 10.2.1 and 10.2.2), it may be seen that only two universities offer courses in Catchment Management. No institutions offer directed courses related to the social and economic perspectives of IWRM. A limited number of universities offer courses relevant to water services and local government.

No university offers courses on alternative sanitation technologies, sanitation related health and hygiene, water services regulation, asset management or compliance monitoring.

Apart from the notable exceptions, the majority of degree courses aim at generic skills development. Task specific competency tends to be promoted by short courses and Learnerships provided by Universities as well as the public and private sectors. Frequently the task specific training courses are developed in cooperation with donor organisations.

A large number of short training courses have been developed by Public and Private Providers of Education Training and Development (APPETD). Despite the number of courses available, it may be seen from the assessment of the 'goodness of fit' between the courses being provided and the skills that need to be developed that a limited number of courses address the task-specific skills development needs of WSAs and WSPs (Appendix 2, Section 10.2.3). None truly aim at ensuring the development of capability.

It is accepted that administrative supportive occupations are important in the overall capacity of a Local Government specifically in performing its Water Sector Services (e.g. accurate billing and procurement of consumer payment by Finance Department). However, this Section focuses more specifically on an evaluation of training initiatives aimed at promoting the attainment of individual technical, environmental health and managerial capacity in the Water Sector through the HET and FET qualifications system.

a) Technical Water Services and Sanitation

The municipal water services environment is deemed to rest on the technical subject fields. An analysis was conducted of the formal qualifications environment (University and Universities of Technology) in this regard. Examples of degrees available in the subject fields that are important to municipal functioning have been extracted from the database provided in Appendix 1 (section 10.1) for ease of reference. These are briefly described below.

³ State of Skills in South Africa (2005); Lawless, A (2005) Numbers & Needs

Table 5: Technical Qualifications

| Qualification name | Type and time span ⁴ | Service Providers (examples) |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------------|
| BEng Civil Engineering | Degree, 4 years | University of Stellenbosch, University of Johannesburg, |
| BEng Chemical Engineering | Degree, 4 years | University of Stellenbosch, University of Western Cape |
| BSc Environmental and Water Services | Degree, 3 years | University of the Western Cape |
| BTech: Engineering Chemical (Environment) | Degree, minimum 3 years | UNISA |
| BTech: Civil Engineering (Can specialise in either Water Engineering Urban Engineering, Environmental Engineering) | Degree (train civil engineering technologists) | UNISA, Cape Peninsula University of Technology |
| National Diploma: B Tech Civil Engineering (Can specialise in either Water Engineering Urban Engineering, Environmental Engineering) | National Diploma, 4 years | Tshwane University of Technology |
| National Diploma: Civil Engineering | Diploma, 3 years | UNISA, Cape Peninsula University of Technology. |
| National Certificate: Watercare | Certificate, min 1 year | UNISA |
| <u>Post Graduate level</u> | | |
| BSc (Hons) Hydrology | Degree, Full-time 1 year; Part-time 2 years | University of Zululand |
| MSc Watercare | Degree, Full-time 1 year; Part-time 2 years | University of Pretoria |

⁴ Time span where available

b) Environmental Management (Health and sustainable use of resources)**Table 6: Environmental Management Qualifications**

| Qualification name | Type and time span | Service Providers (examples) |
|---------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------|
| BSc Environmental Science | Degree, 3 years | Rhodes University |
| Master of Arts: Environmental management | Post graduate degree | UNISA |
| Environmental Management MBA | Degree, 3 years | Rhodes University |
| Bachelor of Science: Environmental Management | Degree, minimum 3 years | UNISA |
| Bachelor of Arts: Environmental Management | Degree, minimum 3 years | UNISA |
| Bachelor's Degree in Technology: Environmental Sciences | Degree, 3 years | Tshwane University of Technology |
| Bachelor's Degree in Technology: Environmental Management | Degree, 3 years | Tshwane University of Technology |
| National Diploma: Environmental Science | Diploma, 3 years | Tshwane University of Technology |
| National Diploma: Environmental Health | Diploma, 3 years | Cape Peninsula University of Technology, Nelson Mandela Metropolitan University |
| B Tech: Environmental Health (also M Tech: Environmental Health available at post-graduate level) | Full-time 1 year; Part-time 2 years | Cape Peninsula University of Technology |
| B Tech: Environmental Sciences | Full-time 1 year; Part-time 2 years | Cape Peninsula University of Technology |

c) Learnerships

A number of Learnerships have been developed that offer replacement for the previous apprenticeship-based training. Learnerships aim at the provision of modules of theoretical training interspersed with practical workplace-based training. Learnerships exist across the qualifications range from NQF Level 1 (which falls in the low skills band) through to NQF Level 5 (which moves into the high skills band) and fall under the ambit of the relevant SETAs. No Learnerships have been developed on post-graduate levels (NQF Levels 6 – 8).

A list of Learnerships developed for the Water Sector is provided below to show the suite of skills to be developed. It may be seen that these have, in large part, been designed to address shortcomings in present formal qualifications and critical skill shortages on the ground.

Table 7: Water sector Learnerships

| Learnership/qualification Name | NQF level | Service Providers (examples) |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------|
| Water Systems Operator | NQF 2 | FPCD, Water Academy, NCWSTI |
| Water Systems Controller | NQF 4 | FPCD, Water Academy, NCWSTI |
| Water Process Controller | NQF 4 | FPCD, Water Academy, NCWSTI |
| Further Education and Training Certificate: Sanitation Project Facilitation, | NQF Level 4, 151 credits (under construction) | FPCD, Water Academy, NCWSTI, Cape Peninsula University of Technology |
| National Certificate: Sanitation Project Co-ordination | NQF 5, 149 Credits | FPCD, Water Academy, NCWSTI, Cape Peninsula University of Technology |
| National Certificate: Community Water, Health and Sanitation Promotion | NQF 2, 120 Credits | FPCD, Water Academy, NCWSTI |
| National Certificate: Community Water, Sanitation and Health Facilitation | NQF 4, 151 Credits | FPCD, Water Academy, NCWSTI |
| Further Education and Training Certificate: Supervision of Wastewater Reticulation Operations | NQF 4, Credits 149 | FPCD, Water Academy, NCWSTI |
| National Certificate: Supervision of Water Reticulation Operations | NQF 4, 136 Credits | FPCD, NCWSTI, Water Academy. |
| Further Education and Training Certificate: Water Purification Processes | NQF 4, 160 Credits | FPCD, NCWSTI, Water Academy. |
| National Certificate: Water Reticulation Services | NQF 2, 126 Credits | FPCD, NCWSTI, Water Academy. |
| National Certificate: Sanitation Project Co-ordination | NQF 5, 149 Credits | FPCD, NCWSTI, Water Academy. |
| National Certificate: Wastewater Process Control | NQF 4, 145 Credits | FPCD, NCWSTI, Water Academy. |
| National Certificate: Wastewater Process Operations | NQF 2, 120 Credits | FPCD, NCWSTI, Water Academy. |
| National Certificate: Wastewater Reticulation Services | NQF 3, 120 Credits | FPCD, NCWSTI, Water Academy. |
| National Certificate: Wastewater Reticulation Services | NQF 2, 128 Credits | FPCD, NCWSTI, Water Academy. |

| Learnership/qualification Name | NQF level | Service Providers (examples) |
|------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------|
| National Certificate: Water Purification Process Operations | NQF 2, 120 Credits | FPCD, NCWSTI, Water Academy. |
| National Certificate: Supervision of Civil Engineering Construction Processes: Water and Waste Water | NQF 4, 241 Credits | FPCD, NCWSTI, Water Academy. |
| Employable Skills Unit for Sanitation Programme Management | NQF 6 | FPCD, Water Academy, NCWSTI, Cape Peninsula University of Technology |

Research results captured in the *State of Skills in South Africa* (2005) indicate that approximately 20% of Learnership training taking place is technical (e.g. could produce a Water Systems Technician). Apart from this, only a further 18% of professional training (some of which will include Engineering training) is applicable to Local Government functioning.

d) Local Government Management

Although this section deals specifically with Water Sector Services qualifications the few local government management and administration specific qualifications and Learnerships that impact on the Water Sector are also identified below.

Table 8: Management related Qualifications

| Qualification name | Type and NQF level | Service Providers (examples) |
|-------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------|
| Certificate: Local Government Administration and Management | NQF 5, 120 credits | UNISA, FPCD, Water Academy, NCWSTI, Cape Peninsula University of Technology |
| Learnerships | | |
| Certificate: Local Government | NQF 5, 120 credits | - |
| Higher Certificate: Local Government | NQF 5, 240 Credits | - |

The qualifications described above have been selected as those related to the most relevant aspects of establishing, operating and maintaining Local Government functions in the Water Sector. A few other qualifications (e.g. BSc Geography, BSc Agricultural Sciences) may touch on one or 2 topics relevant to municipal functioning, e.g. soil and pollution management, irrigation and water management, but have more inapplicable course modules than applicable ones.

CHAPTER 5: IDENTIFICATION OF THE SKILLS REQUIRED PER OCCUPATIONAL CATEGORY OF THE WSA & WSP

5.1 INTRODUCTION

The objective of this chapter is to provide information about the skills and qualifications required for the various occupational categories in water services authorities and water services providers. In this process a distinction has been drawn between required *foundational* skills, *generic* skills, *task-specific* skills and *capabilities* for each occupational category.

The information regarding skills and qualifications has been derived from a detailed analysis of municipal functions and the development of a composite or “typical” generic municipal organogram based on the organisational structure of water services authorities and water services providers.

5.2 REQUIRED WATER SERVICES FUNCTIONS

The Constitution of South Africa places an obligation on local government to ensure that all South Africans have access to adequate services. The Water Services Act (1997) defines a WSA as any municipality (without reference to whether or not it is local or district) that has assumed responsibility for water supply and sanitation services. The regulatory framework⁵ specifies, inter alia, the functions that are to be performed by Water Services Authorities (WSAs) and Water Services Providers (WSPs) within the context of water services provision.

The main categories of WSA and WSP functions are summarised in Table 9, below. The table also lists a set of cross-cutting priorities – general principles and priorities for good governance to which WSAs and WSPs have to conform.

Table 9: Functions of WSAs and WSPs

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

The Municipal Structures Act (1998), which made provision for the division of powers and functions between district and local municipalities, initially assigned the water services functions to local

⁵ Legislation related to water and sanitation delivery and appropriate aspects of water resources management (National Water Act and Water Services Act), municipal functioning (e.g. Municipal Systems and Municipal Services Act) and financial management (e.g. Division of Revenue Act, etc.),

municipalities. Provincial MECs assigned powers and functions to local or district municipalities, based on whether or not sufficient capacity existed at local level to deliver services. However, the Municipal Structures Amendment Act (2000) transferred a number of functions, including those of potable water provision, to district municipalities except in those instances where the function had already been assumed by a local municipality. Based on local government policy it is currently accepted that the default position should be that local municipalities should assume the WSA function, unless there are specific local conditions that hamper building of local capacity. Within this context it is important to note that, despite the fact that the water supply and sanitation services delivery is seen as indivisible, the sanitation promotion function is deemed to be a part of the district municipality environmental health portfolio.

5.3 CONTRACTING OUT FUNCTIONS AND CONTRACTING IN SKILLS⁶

If a WSA does not have the necessary skills or resources to fulfil all of its functions, it may subcontract some of those functions to other agencies, or it may access external support to fulfil those functions. Functions that may be subcontracted or fulfilled by means of external support fall into three categories:

- ❖ water services provision functions (billing, operation and maintenance of water services infrastructure, etc.)
- ❖ once-off events (functions that only need to be performed intermittently, such as the formulation of bylaws, the development of monitoring and evaluation systems, etc.)
- ❖ functions requiring technical / specialist skills beyond those possessed by the WSA (such as the construction of water services infrastructure).

The central responsibilities of a WSA (ensuring access to water services, planning and regulating), on the other hand, cannot be subcontracted to any other agency. The decision of whether or not to subcontract a specific function may also be regarded as one of the functions of a WSA that cannot be subcontracted.

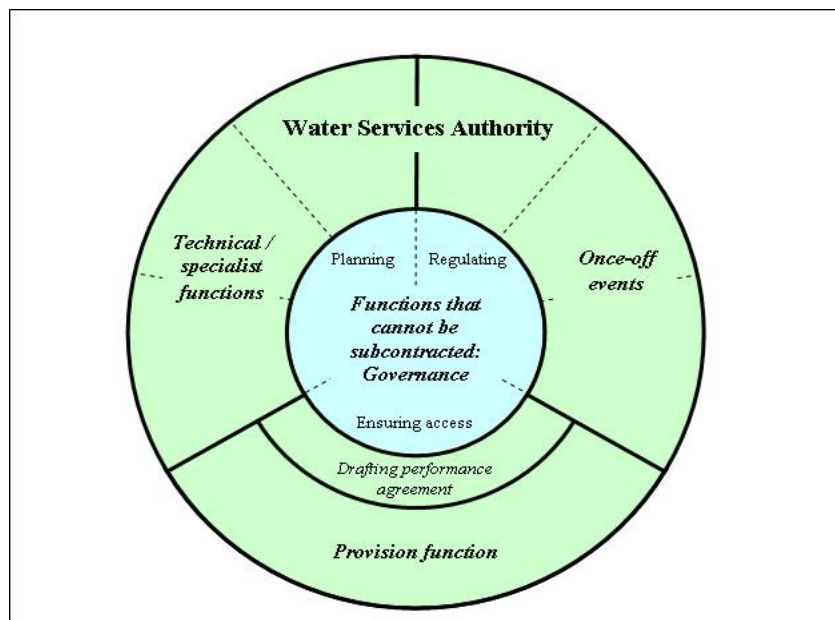


Figure 5: WSA performs all functions itself

⁶ Extracted from Schoeman et al. (2004)

The possibility of subcontracting opens up a range of options for a WSA:

- ❖ It may perform all its functions itself (this option is graphically depicted in Figure 5 above); or
- ❖ It may subcontract or draw on external support for executing some (or all) of those functions that it is allowed to subcontract (graphically depicted in Figure 6 below)

If a WSA decides to subcontract a given function, it acquires certain additional functions that would not have been necessary if the function were fulfilled in-house. These functions include:

- ❖ Drafting the contract or terms of reference
- ❖ Managing a tendering process by which agencies bid for the contract
- ❖ Selecting the most appropriate contractor
- ❖ Monitoring and evaluating the contractor's compliance with the contract.

The function of drafting a contract may also be subcontracted. For example, if the water services provision function is contracted to a WSP, a service delivery agreement between the WSA and WSP must be compiled. The task of compiling this agreement may be subcontracted to a consultant with legal expertise.

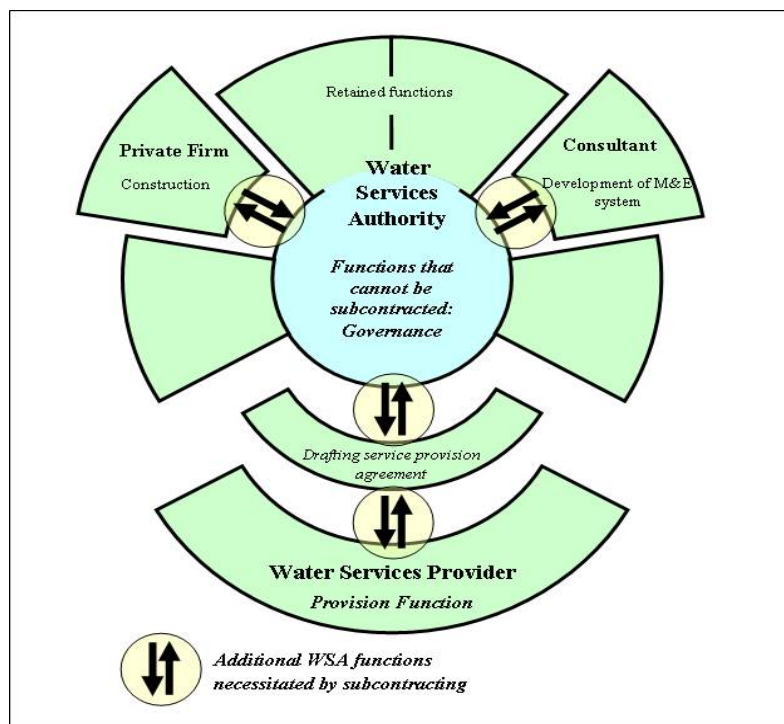


Figure 6: WSA delegates some functions

The size of a water services authority will have significant implications for its skills requirements. A small municipality, for example, may choose to subcontract many of its technical functions (e.g. water services provision). Hence, it would not need to cultivate in-house skills to perform such functions. However, skills relevant to contract management would be very important in a WSA that delegates many of its functions. If WSA functions are included in the job descriptions of municipal staff members who are also responsible for other functions, the skill of “multitasking” becomes important.

A larger municipality, by contrast, would be able to perform more functions in-house. It would therefore be less reliant on subcontracting, but it would require a wider spectrum of technical skills. As the staff complement of a WSA grows, skills relevant to internal coordination and support functions (e.g. HR management and office administration) also become more important.

5.4 COMPOSITE MUNICIPAL ORGANOGRAM

Despite the fact that municipalities vary greatly in size, they are fairly consistent in terms of their organisational structure. The diagram below depicts the organogram of a “typical” municipality. This organogram represents an aggregate of several municipal organograms that are available on the worldwide web, as well as a proposed organisational structure developed for a municipality (Atkinson, Buso & Pienaar, 2003).

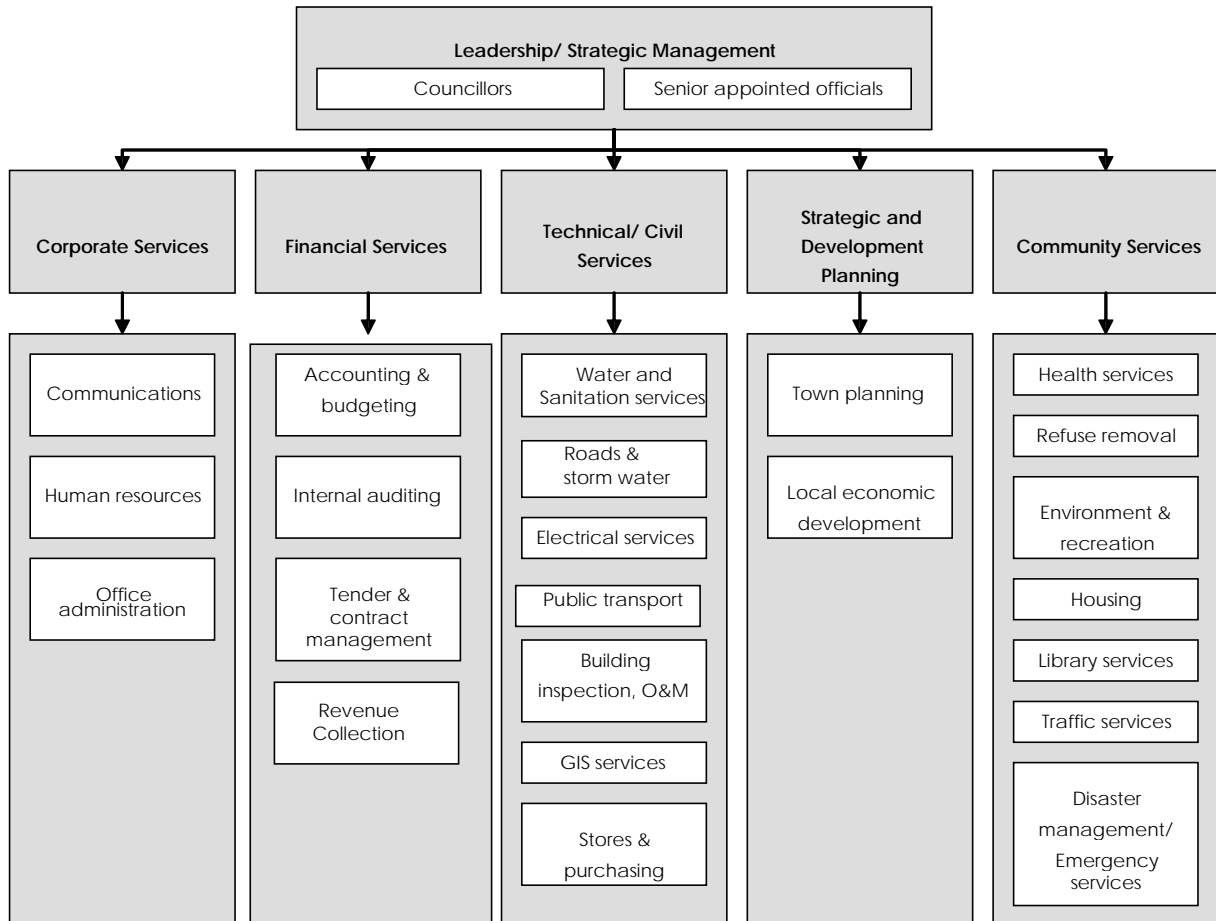


Figure 7: Organogram of an “average” municipality

As this diagram shows, the municipal personnel directly involved with water and sanitation services typically form part of the Technical/ Civil Services Department in a municipality. However, these staff members do not operate in isolation: they are under the authority of senior management and the political leadership of councillors. They also require input and support from various other departments, such as Corporate Services (in terms of human resources management and office administration), Finances (in terms of accounting and budgeting, as well as tender and contract management), Strategic and Development Planning (in terms of local economic development) and health services (in terms of environmental health, including health & hygiene promotion as well as community development workers). In other words, WSA (and, optionally, WSP) functions are spread over several levels and several departments of a municipality.

5.5 OCCUPATIONAL CATEGORIES INVOLVED WITH WSA AND WSP FUNCTIONS

Data on the occupational categories within municipalities was obtained by conducting a search of job vacancies in municipalities advertised on the worldwide web. Information contained in such advertisements includes job titles, required duties, minimum qualifications and the municipal department in which the incumbent would be employed. It was therefore possible to reconcile the data obtained through this Web search with the composite municipal organogram, thereby increasing the level of detail in the organogram to include individual occupations. This list of occupational categories was corroborated and extended by means of additional data obtained from various publications.

Occupational categories directly related to water services authority functions (excluding water services provision) are included as a unit within the Technical Services Department. Functional areas and occupational categories relevant to water services *provider* functions are listed separately. This separation would be necessary in cases where the WSP function is not performed by the WSA.

The occupational categories for WSA skills requirements are set out in the following Table:

Table 10: Occupational categories related to WSA

| |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Leadership/ Strategic Management</u> |
| Mayor & Executive Mayor, Senior Councillors, Ward Councillors, Ward Committee Members, Municipal Manager |
| <u>Department: Corporate Services</u> |
| Director: Corporate Services |
| <ul style="list-style-type: none"> • Communications Public Relations/ Media Liaison Officer, Information in Communications Technology Specialists |
| <ul style="list-style-type: none"> • Human Resources Manager (Human Resources), Administration Clerk (Human Resources), Human and Labour Relations Officers, Performance Management Administrators, Skills Development Facilitators, Manager: Corporate Safety, Occupational Health Officers, Legal Officers, Salaries and Leave Administration Clerks |
| <ul style="list-style-type: none"> • Office administration Secretaries/ Personal Assistants, Administration Officers: Councillors, Office Assistants |
| <u>Department: Financial Services</u> |
| Municipal Finance Manager, Chief Financial Officer |
| <ul style="list-style-type: none"> • Accounting and Budgeting (including Revenue Management) Accountants, Financial Officer (Budget), Financial Officer (Capital), Financial Officer (Financial Statements), Senior Clerks, Clerks (debtors and creditors), Help desk Clerks, Cashiers, Clerical Assistants |
| <ul style="list-style-type: none"> • Internal Auditing Accountants (Internal Control), Junior Internal Auditors |
| <ul style="list-style-type: none"> • Tender and Contract Management Manager (Supply Chain Management), Senior Manager (Budget) |
| <u>Department: Technical and Civil Services</u> |
| Director(s) (Technical/ Civil Services), Civil Design Engineer(s) |
| <ul style="list-style-type: none"> • Water Services Manager (WSA), Planning Engineers, Planning (WSDP, etc.), Senior Technical Officers (Water Supply), Technicians (Water Supply), Senior Technical Officers (Water Treatment), Technicians (Water Treatment), Technicians (Information Management), Connection Inspectors, Artisans, Pump Repairpersons, Waste Management |

| |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Department: Strategic and Development Planning</u> Director: Strategic and Development Planning (also IDP Manager) |
| <ul style="list-style-type: none"> • Town and Regional Planning Town & Regional Planners |
| <ul style="list-style-type: none"> • Local Economic Development (LED) Manager (Economic Development and Tourism), LED Managers, LED Coordinators, LED Officers, Community Development Workers |
| <ul style="list-style-type: none"> • Health Services Environmental Health Officers, Environmental Health Practitioners |

The occupational categories in respect of the WSP skills requirements are set out in the Table below:

Figure 8: Occupational categories related to WSPs

| |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Leadership/ Strategic Management</u> Management Committees, Boards, Manager(s), CEOs |
| <u>Department: Corporate Services</u> Director: Corporate Services |
| <ul style="list-style-type: none"> • Communications Public Relations/ Media Liaison Officer, Information in Communications Technology Specialists |
| <ul style="list-style-type: none"> • Human Resources Manager (Human Resources), Administration Clerk (Human Resources), Human and Labour Relations Officers, Performance Management Administrators, Skills Development Facilitators, Manager: Corporate Safety, Occupational Health Officers, Legal Officers, Salaries and Leave Administration Clerks |
| <ul style="list-style-type: none"> • Office administration Secretaries/ Personal Assistants, Administration Officers: Councillors, Office Assistants |
| <u>Department: Financial Services</u> Finance Manager, Chief Financial Officer |
| <ul style="list-style-type: none"> • Accounting and Budgeting (including Revenue Management) Accountants, Financial Officer (Budget), Financial Officer (Capital), Financial Officer (Financial Statements), Senior Clerks, Clerks (debtors and creditors), Help desk Clerks, Cashiers, Clerical Assistants |
| <ul style="list-style-type: none"> • Internal Auditing Accountants (Internal Control), Junior Internal Auditors, Finance clerks. |
| <ul style="list-style-type: none"> • Tender and Contract Management Manager (Supply Chain Management), Senior Manager (Budget) |
| <u>Department: Technical and Civil Services</u> Director(s) (Technical/ Civil Services), Civil Design Engineer(s) |
| <ul style="list-style-type: none"> • Water Services Provision Managers – Water Services Provision & Treatment Departments, Water & Sewerage Engineers, Senior Technical Officers (Water Supply), Technicians (Water Supply), Senior Technical Officers (Water Treatment), Technicians (Water Supply and Water Treatment), Technicians (Information Management), Superintendent (Water & Sewerage), Connection Inspectors, Artisans, Pump Repairmen, Waste Management, Supervisor (stores), clerks (stores), Laboratory Technicians, Meter Readers, Licensing Officer, Connection Inspectors, Artisans (draughtsmen, fitters & turners, mechanics, electricians, plumbers, etc.), Operators (filters, pumps, water treatment plants, etc.), General Labourers. |

Department: Client/Consumer Services

Manager: Client Services

- **Consumer Services**

Administrator, Help desk clerks, Senior Clerks – Service Fees, Cashiers, Call Centre Operators, Staff - R & D

5.6 REQUIRED SKILLS

The various occupational categories found in each department or unit, in conjunction with the regulatory requirements to be met, were used as basis to identify the functions and stated qualifications associated with each occupational category. Thereafter, each of the functions to be performed was used as basis to identify the foundational, generic and task-specific skills as well as capabilities that would be required in respect of each of the functional areas.

When identifying the skills requirements of institutions, the danger exists that these might be reduced to a set of generic skills areas that are not context-specific enough to be meaningful. In order to prevent this, it is vital that broad bands of skills requirements that are identified need to be measured against specific job functions. The specific tasks for which capacity is required must be specified and the specific skill sets assessed for appropriateness within that particular context.

In this regard, the size of a water services authority will have significant implications for its skills requirements. A small municipality, for example, may choose to subcontract many of its technical functions (e.g. water services provision). Hence, it would not need to cultivate in-house skills to perform such functions. However, skills relevant to contract management would be very important in a WSA that delegates many of its functions. If WSA functions are included in the job descriptions of municipal staff members who are also responsible for other functions, the skill of “multitasking” becomes important.

A larger municipality, by contrast, would be able to perform more functions in-house. It would therefore be less reliant on subcontracting, but it would require a wider spectrum of technical skills. As the staff complement of a WSA grows, skills relevant to internal coordination and support functions (e.g. HR management and office administration) also become more important.

Appendix 2 to this Report sets out details regarding each of the municipal positions and the related functions, while Appendix 3 sets out the details regarding the skills requirements in respect of each of the municipal functions. For ease of reference the information regarding skills requirements has been set out in tables that have been subdivided in terms of occupational categories and *functional areas* within a WSA or WSP. The following Section provides an extract of the different posts and associated skills requirements in respect of a municipal department fulfilling technical and civil functions (as set out in Appendix 3).

5.7 EXTRACT - SKILLS REQUIRED PER OCCUPATIONAL CATEGORY IN A WSA

Table 11: Required skills and qualifications per occupational category in water services authorities (Extract)

| Occupational Category | Foundational Skills | Generic Skills | Task-specific Skills | Capabilities | Required Qualifications |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <u>Department: Technical and Civil Services</u> | | | | | |
| Professionals | | | | | |
| Civil Design Engineer | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills | Leadership skills Computer skills Communication skills Dispute resolution and negotiation skills People management skills Community awareness Budgeting Financial management skills Planning and organisational skills Problem solving and analytical skills Monitoring and evaluation skills Report writing skills | Knowledge of Local Government-related legislation and policies Knowledge of municipal infrastructure operations and maintenance Knowledge of legislative procedures regarding consulting and contracting services Specialist contract management skills Skills to provide input in formulation of KPIs as well as career development and succession plans Understanding of LED, Gender mainstreaming, Batho Pele, Cooperative governance, Stakeholder participation | Ability to assess the feasibility and budgetary implications of projects Ability to incorporate opportunities for community-based public works programmes Ability to monitor performance of contractors Ability to negotiate corrective action against service level agreement objectives & targets Understanding design standards Ability to ensure that career development and succession plans for personnel are in place | BSc Civils; Pr. Eng |

Capacity Needs for the Water Services Sector

| Occupational Category | Foundational Skills | Generic Skills | Task-specific Skills | Capabilities | Required Qualifications |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Manager: Supply Chain Management | English language proficiency (speaking, reading and writing) Mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills | Leadership skills Administrative skills Organisational skills Project management skills Computer skills Professional communication skills Dispute resolution and negotiation skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Report writing skills | Knowledge of Local Government-related legislation and policies Knowledge of legislative procedures regarding consulting and contracting services Ability to prepare bid documentations and invitations for contractors Skills to implement supply chain management systems Specialist contract management skills Understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to formulate tendering policies, procedures and processes Ability to set up tendering commission in line with the supply chain management policies and municipal ordinances Ability to ensure effective management of accounts and recording of bids Ability to oversee review of tenders | BComm degree |
| Manager/Functionary: Water Pollution Control (large WSAs) | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills | Leadership skills Administrative skills Organisational and planning skills Project management skills Computer skills Professional communication skills Dispute resolution and negotiation skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Report writing skills | Knowledge of Local Government-related legislation and policies Technical knowledge of water resources management and pollution control Knowledge of legislative procedures regarding consulting and contracting services Understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to manage the acquisition and maintenance of SABS 17025 accreditation Ability to coordinate ad hoc research and development projects related to effluent quality issues Ability to ensure billing of accounts for industrial effluent Ability to liaise with stakeholders concerning water pollution control/environmental matters/ standards/ legal matters Ability to oversee implementation of contingency plans during emergency situations. | Tertiary qualification in Chemical and Water Engineering/Chemistry |
| Water services authority (excl. water services provision) | | | | | |
| Professionals | | | | | |

Capacity Needs for the Water Services Sector

| Occupational Category | Foundational Skills | Generic Skills | Task-specific Skills | Capabilities | Required Qualifications |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Manager: Water Services Authority | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills | Leadership skills Administrative skills Organisational and planning skills Project management skills Computer skills Professional communication skills Dispute resolution and negotiation skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Report writing skills | Knowledge of Local Government-related legislation and policies Technical knowledge of water and sanitation services infrastructure operations and maintenance Knowledge of legislative procedures regarding consulting and contracting services Understanding of Demand-Responsive Approaches to service delivery Specialist contract management skills Understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to deal with municipal water and sanitation services Ability to manage formulation of Water Services Development Plan (WSDP) Ability to assess the feasibility and budgetary implications of water and sanitation projects Ability to incorporate opportunities for community-based public works programmes Ability to promote a demand-responsive approach to service delivery Ability to monitor performance of contractors Ability to negotiate corrective action against service level agreement objectives and targets Ability to ensure that career development and succession plans for water and sanitation services personnel are in place | BSc degree or diploma in Civil Engineering |
| Water Demand Management Professional Officer (large WSAs) | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Planning and project management skills Analytical skills and problem solving skills Organisational and planning skills Financial management skills Innovation Computer skills Communication skills Report writing skills Ability to understand issues of a technical and complex nature | Understanding of water and sanitation infrastructure in municipal area Knowledge of Local Government-related legislation and policies Knowledge of water and sanitation industry Knowledge of infrastructure planning Advanced computer literacy, including GIS, SAP and database skills Understanding of: • LED • Batho Pele • Cooperative governance | Ability to assist with compilation and maintenance of WSDP Assisting with water services tariff modelling (incl. data collection and analysis) Ability to perform water balance calculations and water audits | A first degree or diploma in Civil Engineering |

Capacity Needs for the Water Services Sector

| Occupational Category | Foundational Skills | Generic Skills | Task-specific Skills | Capabilities | Required Qualifications |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Technicians/Associated professionals | | | | | |
| Technician – Water Resources Planning (large WSAs) | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills | Administrative skills Organisational and planning skills Project management skills Computer skills Communication skills Community awareness Dispute resolution and negotiation skills Problem solving and analytical skills Report writing skills | Knowledge of Local Government-related legislation and policies Knowledge of water-related policies and bylaws Technical knowledge of water resources management and planning Knowledge of integrated development planning process Public consultation skills Understanding of: <ul style="list-style-type: none"> • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to support WSA Manager in planning function Ability to prepare and update water-related policy and bylaws Ability to compile WSDP Ability to ensure implementation of projects in accordance with IDP, WSDP and approved schedules Ability to consult with public on policy, tariffs, planning and service delivery Ability to liaise with stakeholders in planning of strategies | Diploma or Degree in Civil Engineering |

CHAPTER 6: TRYING TO COME TO GRIPS WITH NUMBERS

6.1 INTRODUCTION

A key consideration in developing strategies to address skills development has been in terms of the number of people to be trained in order to ensure sufficient numbers of skilled personnel within the municipal water services sector. Obtaining answers with regard to deficiencies in the existing staff complement allows at least a guesstimate of the number of new incumbents that are required to be produced by the system as opposed to the numbers of persons who may, potentially, need 'upskilling'.

While answers to this question are vitally important, current deficits in information allow only inexact estimates. A number of specific problems aggravate accurate assessment of numbers in this regard. These include the fact that:

1. It is not possible to ascertain with certainty the exact number of municipal employees who are directly involved in municipal water and sanitation functions. Where numbers are known, it is frequently not possible to determine the percentage of time employees are actively engaged in such functions, especially in smaller municipalities.
2. No appropriate national or international benchmarks exist that may be used to assess whether or not a municipality has an 'adequate' number of staff.
3. No "average" municipality exists. While an 'average organogram' may be applied across the board, small, rural municipalities differ considerably in size and capacity from, for instance, the large metros. In addition, significant differences exist between provinces as well as between municipalities regarding external variables such as backlogs that need to be addressed, degree of automation, etc.
4. The number of water and sanitation staff required by a municipality does not only depend on "external" variables (such as service area, service backlog, etc.) but also on "internal" variables such as staff competence and productivity.

According to an assessment of the current situation within WSAs and WSPs, it has been possible to attempt a *first order approximation* of the numbers of *additional* skilled staff that will be required to ensure timely delivery against the MDG targets in the first instance and to ensure the delivery of sustainable municipal services in the medium- to longer term in the second instance.

It is accepted that the assessment of numbers of personnel required as set out in this Chapter is inexact. Despite this, it is provided as a starting point towards answering questions related to how big the problem really is. Data that served as basis for the calculation of these numbers were drawn from a variety of sources. While some of the datasets and calculations appear in this Chapter, a more extensive description of the methodology for moving from the known to the unknown has been set out in Appendix 4 to this Report.

6.2 CURRENT SIZE OF THE SECTOR

Based on information derived from a variety of sources, including the Water Sector Skills Plan (2003/2004), there are in the order of 224 000 persons employed in the water sector. Municipalities that fulfil the functions of WSAs form a subset of water services sector institutions. If the number of Councillors are taken into account, there is estimated to be in the order of 78 000 personnel members specifically employed within WSAs. The following Table sets out relevant data in this regard.

Table 12: National totals of employment in water services sector institutions

| LOCAL GOVERNMENT | | OTHER WATER SECTOR INSTITUTIONS [‡] | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------|--------------|
| Water services authorities: | | | |
| Water & sanitation staff ^{7*} : | 20 000 | DWAF: | 12000 |
| Councillors [‡] : | 9000 | Water boards: | 11000 |
| Senior management [‡] : | 2 800 | Other water utilities: | 9000 |
| Other staff: | 46 200 | | |
| Total personnel in WSAs[*] : | 78 000 | | |
| Other local government personnel: | 146 000 | | |
| Total[‡]: | 224 000 | Total: | 32000 |
| [‡] From Sector Skills Plan 2003-2005 (LGWSETA, 2003), adjusted to take into account the transfer of approximately 8 000 DWAF employees to WSA, to be completed by 2008 | | | |

6.3 ARE THERE REALLY SHORTAGES?

Much has been written about the shortage of staff. However, most of it is based on municipal self-reports that have not necessarily found echo in the Municipal Workplace Skills Plans. In addition, comparative analysis reveal that South African municipalities (many of whom perform poorly) have, on average, slightly *higher* numbers of water and sanitation staff than (as example) New South Wales water utilities (where poor performance is not a significant problem).

However, it is not believed that attempts to measure adequacy by drawing international comparisons will address the realities of the South African situation. Availability or absence of information communication technology, automation, delivery targets, stage of institutional development and reform as well as the tremendous challenges related to righting historical inequity make such comparisons at best an academic exercise.

6.3.1 Assessing the validity of reported shortages

The following Table provides an analysis of data extracted from various sources and compares WSAs who report having **sufficient staff** against number of WSAs who report having **insufficient staff** with regard to the indicator: *number of households per WSA staff member*. While other variables (such as backlog) would play a part in more accurately defining the exact degree of insufficiency, use of this indicator provides a solid basis (currently available) for a first order testing of and measuring deficiencies in personnel numbers.

What is startling from the analysis is the fact that there is more than a ten-fold difference in the ratio of households to be served per water staff member when comparing WSAs that report having sufficient staff and those that report having insufficient staff. Clearly, in this instance, size matters. This difference in capacity between the 'haves' and the 'have nots' holds tremendous implications for skills development initiatives and underscores the fact that only a dedicated linked up cooperative governance approach to the problem will suffice.

It must be stressed as well that ensuring sufficiency within the current context does not mean that municipal staff numbers should be increased exponentially to ensure adequate human resources numbers. Where additional appointments are made, decisions will need to be based on a thorough understanding of the particular, essential in-house skills needs within the organisation to ensure sustainable delivery and critical mass. As far as possible, use should be made of a resource base of skilled professionals who can be seconded to municipalities on an 'as needs' basis to assist in

⁷ From Municipal Capacity Assessment (2003/ 2004) (Municipal Demarcation Board, 2004)

execution of specific functions. Unless this approach is taken, the ongoing financial viability of municipalities will be compromised or continuing subsidisation will be required.

Table 13: Comparison of average number of households per dedicated WSA staff member⁸

The average number of households per water staff member

| | |
|-------------------------------------------------------------|--------|
| For WSAs that report having sufficient water staff | 985 |
| For WSAs that report having insufficient water staff | 11 177 |

The average number of households per sanitation staff member

| | |
|------------------------------------------------------------------|--------|
| For WSAs that report having sufficient sanitation staff | 1 139 |
| For WSAs that report having insufficient sanitation staff | 14 055 |

6.3.2 Comparing external challenges and human resources base

a) Differences from a typology point of view

Using the DPLG municipal typology⁹ as basis, a comparison has been drawn between the various types of municipalities in terms of human resources and external challenges, and its human resource base. For ease of reference, a description and associated characteristics of each municipal group in this typology has been included in the table below.

Table 14: Characteristics of municipalities in the DPLG typology

| Municipal category | Description | Characteristics | Average number of municipal staff | Average number of households to staff member | Average number of households to <u>water</u> staff member | Average number of households to <u>sanitation</u> staff member |
|--------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------|
| Group 1 | In areas with no established towns | No formal economy Most have vast traditional authority areas Service delivery levels – very low Percentage unserved and underserved households – very high | 50 | 1 300 | 42 133 | 45 417 |
| Group 2a | In areas with one or small towns (Former TBVC areas) | Limited formal economy Some traditional authority areas Service delivery levels – low to very low Percentage unserved and underserved households – High to very high | 180 | 300 | 10 318 | 13 003 |

⁸ Perold, J (2005)

⁹ Kitchin and Owens (2005)

| Municipal category | Description | Characteristics | Average number of municipal staff | Average number of households to staff member | Average number of households to <u>water staff</u> member | Average number of households to <u>sanitation</u> staff member |
|--------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------|
| Group 2b | In areas with one or more small towns (Non-TBVC areas) | Sector specific formal economies Some traditional authority areas Service delivery levels low to moderate Percentage unserved and underserved households – Moderate to high | 230 | 80 | 2 216 | 12 967 |
| Group 3 | Large urban areas | Diverse economy Some traditional authority areas Service delivery levels – moderate to high Percentage unserved and underserved households – moderate to low | 1 500 | 60 | 1 605 | 2 652 |
| Group 4 | Metropolitan municipalities | Extensive development Multiple business districts and industrial areas Geographically extensive Diverse, complex economies Percentage unserved and underserved households – low | 5 000 | 130 | - | - |

Calculations based on the information set out in the above Table shows that only approximately 3% of municipal personnel across all categories of municipalities are actively engaged in the execution of tasks related to the water supply and sanitation services functions. This has important implications for the dedicated functioning required to avoid contra-productive multi-tasking as well as for critical mass.

Personnel from Group 1 & 2 (a & b) municipalities report that their functions address a number of sectors, resulting in only a percentage of time specifically utilised for water and sanitation functions. Yet, it is in these areas where the most viable service options (e.g. VIP facilities, community-public partnerships, etc.) will require significant investments of time and human resources from a H & H and DRA perspective to delivery, if the national targets are to be achieved.

While the tremendously low ratio of staff to households is of concern within the context of Group 2 a & b municipalities, an additional complication is that these areas pose significant problems in terms of the implementation of appropriate and sustainable sanitation and water solutions. This is severely aggravated by the O&M challenges within these areas. These areas also show the highest incidence of bucket systems that require eradication.

b) Differences from a district and local municipality perspective

The differences between WSAs that are local municipalities and those that are district municipalities were then subjected to closer scrutiny. This step was motivated by the fact that there are significant regional differences in terms of the proportion of local municipalities that have been authorised to perform the water function. In areas characterised by low levels of economic development, local municipalities are generally not well-capacitated. In those areas, the WSA function is usually retained by the relevant district municipalities. However, these areas also pose the most severe challenges for a WSA in terms of the size of water and sanitation services backlogs, the strength of its revenue base, etc.

The table below indicates a few of the significant differences between local and district municipality WSAs in each municipal category. As this table shows, the most significant differences are between local and district municipalities in Groups 2(b) and 3. In these groups, the average percentages of households with limited water and sanitation services are much higher in areas where district municipalities are WSAs than in areas where local municipalities are WSAs. A difference between district and local municipalities that is evident in all groups is that the ratio of households to municipal staff is much higher in the former than in the latter. This is true for staff across all municipal sectors, including water and sanitation services.

Table 15: Differences between local and district municipalities that are WSAs

| | Municipal category | | | | | | | |
|------------------------------------------------------------------------------------------|--------------------|-------|----------|------|----------|-------|---------|-------|
| | Group 1 | | Group 2a | | Group 2b | | Group 3 | |
| | LM | DM | LM | DM | LM | DM | LM | DM |
| Number of municipalities that are WSAs | 4 | 14 | 4 | 11 | 92 | 4 | 27 | 8 |
| % households under-served – water* (Census 2001 data) | 9% | 6% | 10% | 25% | 7% | 20% | 6% | 40% |
| % households under-served – sanitation** (Census 2001 data) | 83% | 45% | 77% | 70% | 41% | 61% | 35% | 74% |
| Average no. of water staff per WSA | 2.5 | 2.7 | 13.3 | 7.5 | 25.5 | 55.0 | 107.4 | 144.3 |
| Average no. of sanitation staff per WSA | 4.0 | 1.9 | 5.5 | 4.2 | 31.1 | 15.3 | 108.9 | 80.9 |
| No. households to water staff member | 1031 | 41102 | 2638 | 7680 | 470 | 1746 | 598 | 1007 |
| No. households to sanitation staff member | 559 | 44858 | 4107 | 8896 | 360 | 12607 | 630 | 2022 |
| * Obtaining water from spring, rain tank, dam, pool, river, stream or water vendor | | | | | | | | |
| ** VIP, pit latrine, bucket latrine or no sanitation | | | | | | | | |
| Shaded: significant differences between local municipalities and district municipalities | | | | | | | | |

These trends indicate that, in general, the challenges faced by district municipality that act as WSAs are *considerably greater than those facing local municipalities of comparable size and capacity that act as WSAs*. The key motivation of the Municipal Structures Amendment Act (2000) for assigning the water supply and sanitation services delivery to district level appears to be to ensure human resources and service delivery capacity. It is clear that such an assumption has, in large part been erroneous.

6.3.3 Situation in WSAs performing a WSP role

It is accepted that staff shortages within municipalities that perform both an authority as well as a provision function will have more serious impacts on the sustainability of services delivery as well as progress in meeting backlogs. The following Table provides an assessment of the reported staff shortages in WSAs that also fulfil a WSP function¹⁰. The DPLG municipal typology¹¹ has, again, been used as basis for drawing a comparison between the various types of municipalities.

¹⁰ Municipal Demarcation Board

¹¹ Kitchin and Owens (2005)

Table 16: Capacity deficits in WSAs that perform WSP functions

| MUNICIPAL GROUP | NUMBER OF WSAs | NUMBER OF WSPs | INSUFFICIENT CAPACITY: WATER | INSUFFICIENT CAPACITY: SANITATION | % OF WATER SERVICE PROVIDERS WITH INSUFFICIENT CAPACITY | |
|-----------------|----------------|----------------|------------------------------|-----------------------------------|---------------------------------------------------------|--------------|
| | | | | | WATER | SANITATION |
| 4 | | - | - | - | - | - |
| 3 | 36 | 31 | 23 | 25 | 74% | 81% |
| 2a | 98 | 85 | 51 | 44 | 70% | 52% |
| 2b | 15 | 9 | 7 | 7 | 78% | 80% |
| 1 | 18 | 10 | 6 | 5 | 60% | 50% |
| %/ TOTALS | 165 | 135 | 87 | 81 | 70.5% (ave) | 65.75% (ave) |

It is clear that, apart from Metropolitan municipalities (Group 4) where the WSP function is implemented through a variety of provider options, 82% of WSAs (135 of 165) in municipal groups 1 – 3 undertake their own provider functions. Of these, 87 of the 135 (an average of 70.5%) have indicated that they have insufficient personnel to deliver on water services while 81 (an average of 65.75%) have indicated insufficient staff to deliver in respect of sanitation.

The high percentage of municipal WSPs without adequate personnel, together with the specific delivery challenges faced by each municipal group is cause for extreme concern.

6.4 MOVING TOWARDS QUANTIFICATION

Taking the MDG targets as the point of departure for final delivery against backlogs, South Africa has less than five years to address the backlog. At an average of 240 working days per year (an overestimation), this means that **South Africa has approximately 1 125 days left to ensure that the 2010 targets are met.**

It is underscored that this quantification is mainly focused on the requirements in respect of addressing the backlogs and not on the broader requirements for sustainable services delivery. However, the information set out in this Chapter has shown that there is significant cause for concern regarding the low staffing levels found especially in the non-metropolitan areas. An important insight emerging from this categorisation is that those municipalities that have the *least capacity* in terms of skills and human resources also tend to face the *greatest external challenges* in terms of service delivery backlogs, inadequate income bases, etc. These tend to be:

- ❖ The smaller, rural *local* municipalities that are WSAs; and
- ❖ Several of the medium-sized and larger *district* municipalities that are WSAs.

These institutions therefore face a dual challenge: not only are they required to increase their capacity to a level matching that of better-resourced municipalities; they also require *additional* capacity in order to deal with the greater challenges posed by the adverse environment in which they find themselves.

It has commonly been accepted that there are between 16 and 18 million people who still lack access to basic sanitation services. This is without taking into consideration potential additional delivery resulting from population increases, migration into urban areas (in particular into informal settlements) and deterioration of existing services that are unsustainable. If it is accepted that an average household consists of approximately five people, then there is a requirement to ensure delivery to approximately 3.6 million households.

The following Section of the Report provides conservatively calculated personnel requirements, largely at intermediary and high skills levels, that will need to be in place to meet the targets set. It is stressed that these numbers are provided as a **starting point for discussion and planning** rather than attempting to provide a definitive last word. In addition, it only touches on the most salient water and sanitation-related occupational categories without addressing required increases in respect of e.g. financial management, planning capacity and support staff, amongst others.

6.4.1 Technicians, Technologists, Engineers

The Lawless Report (2005) has identified that at least 800 to 1200 more civil engineers, technologists and technicians will be required in local government alone within the short to medium

term. While not all of these are required within the context of water and sanitation delivery, it is important to note that this assessment is purely in terms of **existing vacancies** rather than against overall requirements for scaling up infrastructure delivery. At least double this number will be required for the proposed accelerated infrastructure development initiative.

6.4.2 Water/Waste Water Process Controllers

New regulations have been drafted in terms of the National Water Act (Act 36 of 1998). The Regulations provide the statutory requirements for the NQF Qualifications of Water Operators, and the need to register all water and waste water treatment facilities and their respective Operators with the DWAF.

The Department estimates that there are between 3 000 to 5 000 such Operators working in about 1 500 to 2 000 water and waste water treatment plants within municipalities throughout South Africa. The majority of these are relatively small systems (micro, small and medium) that do not comply with regulatory requirements. Immediate skills development is required at close on 30% of these plants to avoid crisis situations related to the outbreak of waterborne diseases (such as that at Delmas during 2005). Approximately 66% of plants require intervention in the short to medium term. A key aspect for intervention is to ensure skilled process operators/controllers at all NQF Levels as well as mechanical/electrical maintenance crew. Surveys¹² have found that very few of the operators working at these plants are qualified. Confident predictions are that a minimum of 4 000 skilled process controllers are required in the short to medium term as part of a process to address this problem.

6.4.3 Artisans and artisan assistants

Delivery would mean that a minimum of 3 000 toilet structures will need to be built per day. Assuming that only one third of these will be VIP units, this translates into 7.2 million person days if projects are to run concurrently and standard building practice for a VIP unit (calculated as three days working time of one artisan plus one assistant to build one completed unit) is taken as benchmark. Based on this, at least 1 167 artisans and 1 167 builder assistants (2 334 in total) will be required per day to ensure delivery of VIP structures alone. From a project management and execution point of view it is clear that this number will, in practical terms, need to be significantly higher. In addition, at least the equivalent number of artisans will be required to deliver the balance of 2 000 toilet structures, assumed to involve higher levels of technology.

The above numbers exclude the fact that existing vacancies and shortages in this occupational category are estimated to be between 17% and 33% (LGSETA 2002 – 2005 Skills Plan, 2003). Measured against existing numbers, this translates to approximately 750 additional artisans required to ensure sustainable services delivery on an ongoing basis.

6.4.4 Health & Hygiene Education functions

South African studies have shown that most of the water and sanitation projects carried out by local authorities significantly lack health and hygiene awareness and motivation, even though the most successful sanitation initiatives are those that emphasise education rather than simply providing toilets. Health and hygiene education and awareness creation enable communities to contribute effectively to the provision of sanitation facilities and increase the chance of achieving the necessary behavioural changes to sustain health. Despite this, data generated by the Nation-wide Sustainability Audit of Sanitation Facilities (2005, p. 49) confirm that most “sector programmes neglected sanitation health and awareness”.

If the health benefits of sanitation are to be achieved, Health and Hygiene promotion will need to be provided to 3.6 million households as well as to those existing households who have not yet received such a service. If it is (extremely conservatively) assumed that one Health and Hygiene Promoter can extend services to 2 500 persons, this means that South Africa will require a cadre of

¹²

Communication from the Amandla – Africa College of Excellence to the ESETA (2006)

7 200 Health and Hygiene Promoters per day to ensure that those who are not yet adequately served will be reached.

6.4.5 Sanitation Advocacy and Demand Responsive functions

While some progress has been made in the last ten years, it is clear that the need to ensure effective demand creation on the one hand and to engage communities in demand responsive approaches to the provision of sanitation services on the other hand will need to be extended dramatically. In this regard, the Nation-wide Sustainability Audit of Sanitation Facilities (2005, p. 48) has found that only 50% of community respondents across the nine provinces confirmed that households had been involved in decisions around technology choice.

An extremely limited cadre of skilled personnel exists who can be used to ensure that sanitation advocacy and the necessary demand driven delivery can be ensured. In the limited instances where the approach is implemented by WSAs, authorities report that they make use of external appointments for this delivery component.

It is assumed that a minimum of 3.6 million households will need to be reached in order to ensure full coverage. If the eThekweni Municipality experience is taken as standard, each DRA facilitator will need to visit each household a minimum of five times to ensure that DRA is effectively implemented. This means that in the order of 18 million visits will be required over a period of 1 250 days, which translates into 13 636 visits per day or close on 2 000 per hour within each seven hour day. This would, conservatively, translate to approximately 2 500 personnel members. While it is clear that a less human resource intensive strategic approach aimed at ensuring mobilisation at community or ward level may be successful, the human resource requirements still remain daunting in the extreme.

6.4.6 Supervisory staff requirements

At least 2 000 supervisors across the different functional areas will be required to oversee the work of H&H promoters, DRA facilitators, artisans and artisan assistants.

6.4.7 Management Staff Requirements

Based on data extracted from the LGWSETA database of Workplace Skills Plans (2003-2004), there is significant deficit in management capacity (based purely on existing numbers) within the water sector and, particularly within WSAs (if the internationally accepted benchmark, stating that an ideal management to employment total ratio of in the order of 10% is used). This means that, using existing personnel levels as basis, at least 6 000 more management staff will be required. In addition, at least another 2 000 managers will be required to address the conservatively estimated increases required in municipal staff numbers.

CHAPTER 7: KEY ISSUES AND CONCLUSIONS

7.1 INTRODUCTION

WSAs and WSPs face a significant number of challenges that impede functioning. Based on the need for capacitated functioning, there are two specific focus areas for skills development and the overall promotion of capacity. These are:

- ❖ The need to meet the MDG related targets in the short to medium term, which include addressing the water supply and sanitation backlogs; and
- ❖ The need to ensure the delivery of effective, efficient and sustainable services in the short-, medium-, and long-term.

Municipalities face a triple challenge: (i) general shortages in key skills nationally, (ii) poorly developed or absent remuneration and retention strategies that serve to discourage skilled workers, and (iii) a requirement for rapid increments in delivery. The somewhat daunting challenge is to ensure that these problems are addressed coherently within the context of ensuring effective, sustainable services delivery in a manner that promotes the overarching imperatives for socio-economic growth and reform.

Within this context, it will be particularly important to ensure that the cooperative governance requirements that are intrinsic to the support of sustainable municipal delivery are not only planned, but that collaboration between departments is implemented consistently and coherently. In particular, the activities of different departments towards meeting a joint objective should be 'rewarded' through the formulation of performance criteria that acknowledge achievement of such objectives.

This chapter provides an overview of challenges and gaps related to skills development within the municipal context. While key issues are noted, a number of the institutional and environmental constraints to skills development and capacity building are highlighted as well. These obstacles are highly significant in that they impede efforts to address gaps in capacity and skill within South Africa in general and in water services sector institutions specifically.

The first Section of this Chapter provides a general overview of the key issues identified during this study. These are divided into a brief discussion of (i) gaps in respect of necessary skills, (ii) gaps in HET and FET training initiatives, and (iii) gaps in capacity building initiatives.

7.2 KEY ISSUES EMERGING FROM THE REVIEW

7.2.1 Skills Shortages

a) Engineering professionals

Lawless (2005) highlighted the critical shortage of civil engineering professionals. This situation is due to many factors such as poor quality of mathematics education at matric level, thus leading to limited number of matriculants who meet the entry requirements for engineering faculties and in addition, junior engineers lack access to mentors because there are too few experienced engineers.

b) Financial management skills

The DBSA-Wits Enterprise study (2004) identified the lack of financial skills as the biggest gap for most municipalities and this affected all levels from treasury to senior councillors. This has been exacerbated by requirements at local level mandated by the implementation of the Municipal Finance Act. This Act requires municipalities to comply with GAAP and GAMAP accounting practices. There is a need for training programmes to ensure that municipalities have the capacity to comply with the new legislation.

c) Health & Hygiene and the promotion of Demand Responsive Approaches

The absence of sufficient, skilled health and hygiene practitioners within municipal context – identified through this and other studies - will continue to prevent the achievement of health as the overarching objective of sanitation delivery. Unless this aspect receives targeted intervention, the objective of ensuring 'health for all' will not be achieved.

Despite the fact that the DRA requirement enhances the success and sustainability of the services and reduces the overall costs of systems, there is ongoing evidence that there is insufficient attention to the planning and implementation of Demand Responsive Approaches in municipal delivery systems. A key factor appears to be the dearth of skilled facilitators within municipalities.

d) Shortage of technical skills

Several studies have highlighted the shortage of technical skills especially engineering professionals in municipalities; the skills shortage affects both the public and private sector institutions thus resulting in severe competition for the limited number of qualified and experienced engineers.

Some of the skills gaps experienced could also be addressed by training and upgrading the skills of currently employed staff in Local Government. This could especially be helpful in rural areas where it is difficult to entice professional and higher skilled technicians to accept employment. In such rural areas much lower skilled technical personnel are forced to function on a higher competence level because posts are vacant for long periods of time (up to 2 years) in technical managerial and supervisory posts. Given this situation, the relatively low level of training of current staff (between 12 – 28%)¹³ is not promising. Training rates in this regard can still be improved and contribute to addressing skill shortages, especially in geographically distant and vast rural areas.

e) Developmental local government skills

The change of local government from a service provider to an agent for the promotion of local economic development and poverty eradication requires municipal officials with skills in community development and entrepreneurship. These skills are necessary for those officials responsible for water and sanitation infrastructure projects because they are expected to adhere to the requirements of the Expanded Public Works Programme (EPWP) which focuses on job creation and local economic development. Programmes are needed to accelerate skills development in community development and development planning.

Allied to this is that sanitation (and waste management) programmes at local level are frequently not designed to contribute to poverty reduction. Any serious concern with issues of poverty, equity, the impact of the HIV/AIDS pandemic, improved gender equality and improved health status must lead to a paradigm shift which emphasises access to opportunities for local economic development and investment resources being used to provide opportunities for the largest number of beneficiaries.

f) Leadership and management skills

A number of serious skills and capacity gaps have been identified amongst councillors and senior management by this and other studies.

Strategic management and leadership were seen as the greatest challenge for local authorities. In particular, the changing environment within which municipal services delivery must be implemented mandates that the management capacity in most municipalities is strengthened significantly. In particular, there is a need to ensure that the capability of councillors and managers will be strengthened significantly to ensure that the objectives of good governance, strategic leadership as well as effective planning and management will be enhanced.

Of key importance in strengthening a strategic management approach is the fact that the achievement of the objectives of LED will be dependent on the ability of councillors and managers to engage in change, risk and relationship management. As well, the paradigm imposed by this

¹³ State of Skills in South Africa (2005:53)

approach requires that officials are adequately prepared for the implementation of community based development approaches, enhancement of local job creation opportunities and building local markets, etc.

An additional skills deficit that will need to be addressed is the fact that a significant number of municipalities appear to understand the policy and legislative environment under which they operate.

7.2.2 Gaps in HET & FET training initiatives

Whilst important generic skills training is generally provided via the formal university channels, the following aspects are generally lacking in terms of skills development in the high and intermediate levels (as described by the *State of Skills in South Africa* report, 2005):

a) Critical Skills development

It is generally accepted that skills shortages in key occupational areas are hindering future economic growth and that the issue of “scarce skills” has become a government priority. According to an assessment by the Department of Labour, the scarce skills projected for the period 2004-2009 included (not surprisingly) Engineers for all fields, including those particularly relevant to Local Government namely Civil and Chemical Engineering (high skills level). A similar situation exists at the intermediate level skills of Technician, namely Water, Electrical and Mechanical.

Output of post-graduates is very limited, impacting on the replenishment of research and academic staff in Engineering and related technical fields. The current R&D workforce and academic population responsible for training in the scarce skills highlighted here, is ageing. The absence of adequate replenishment exacerbates the current crises (*State of Skills in South Africa*, 2005).

b) University and University of Technology Courses - High Level Skills

(1) Comprehensive technical expertise is provided at this level through degrees and Diplomas in, for example, a BEng Civil Engineering. However, the application of this technical expertise in a local government / policy environment (e.g. policy development skills, Local Economic Development) and in co-operation with community and civil society stakeholders is not addressed sufficiently, if addressed at all.

(2) Similarly, financial management in the government context is not addressed: this includes costing of projects, budget control, etc. Many people with technical (BSc Eng.) qualifications have to function as heads of sections where they are also responsible for financial management of their sections. Government finance introduces its own dynamic in this regard.

(3) Skills for reporting on technical aspects are also limited, e.g.

- ❖ Establishing reporting systems to ensure flow of information to enable satisfactory operation and maintenance.
- ❖ Writing of actual reports for use by Municipal Managers, Technical Managers, Boards, etc. on technical aspects requiring attention are also not part of these qualifications, but essential to manage technical systems in a local government context.
- ❖ Writing skills for documents such as a Water Services Development Plan (WSDP) and requests for access to national Government Grants (e.g. MIG, Project Consolidate) are also insufficient.

(4) Knowledge of the legal aspects of Local Government, e.g. development of bylaws, and water related policies. Knowledge and comprehension of the government system as a whole, its functioning and the relationship of Local Government to the total government system, and the importance of policy development in this context are insufficient.

(5) People management skills. Municipal management functions are inextricably linked to managing the human resources efficiently to ensure sustainable service delivery. This aspect is not addressed sufficiently in the current technical qualifications, if addressed at all. Engineers are sometimes forced to enrol for a second degree in this regard, e.g. an MBA (which would also fill other skills gaps, e.g. financial management).

c) University and University of Technology Courses - Intermediate Level Skills

Technical staff with Diplomas and National Certificates would usually serve at this level. An example in this regard is a Technical Officer – Water Supplies. At this level the following skills gaps could be identified:

- (1) People management and relational skills. Technical staff at this level are usually required to function in multi-functional teams (sometimes as team leader) to operate and maintain water and reticulation systems, and must therefore be able to maintain effective working relationships with other members of staff.
- (2) Basic comprehension of the importance of appropriate regulations and bylaws in addressing certain consumer-related problems affecting physical systems.
- (3) Reporting skills: maintaining channels of communications in terms of technical problems experienced, either verbal, written or electronically.
- (4) Customer service orientation with regard to service provision in general is needed, e.g. executing Batho Pele principles.
- (5) Writing skills: preparation of tender documents and writing of reports that contain technical information.

Artisans are usually trained in a specific technical field, e.g. electrical, or mechanical, or bricklaying, etc. However, when functioning in a municipality (especially in rural area where technical staff numbers are limited) their expertise needs to include basic knowledge of piping and reticulation systems for them to comprehend the complexity of the system they are dealing with. An electrician may for example fix a purely electrical problem in a reticulation system's pump, but because he failed to understand the complete system, put pressure on other parts of the system that may cause a failure of the whole system, or undermine sustainable service provision to consumers (e.g. compromise water hygiene and health by flushing the pump inappropriately).

In some of the qualifications, knowledge valuable to local government water & sanitation systems is only dealt with adequately at post-graduate level e.g. BSc (Hons) Hydrology. Furthermore, in terms of contributing to innovation and a scientifically and technically skilled workforce the percentage of students enrolled for post-graduate study is critical. In this regard, the **State of Skills in South Africa** report states that only 15% of total 2001 student enrolments were at post-graduate level.

From the available evidence it can be discerned that only a limited number of the post-graduates required within the Local Government Water Sector are actually produced by the system. Of those who are produced, limited numbers will seek employment at local government level, given the market competition for the few post-graduates available. This fierce competition for graduates is very evident in the Engineering field in general: 77,5% of Engineering students find immediate employment after graduation and a further 18,8% within 6 months of completion of their studies (thus almost 97%). This far exceeds the uptake for students completing Economic and Management Sciences (65,4%) or Agriculture (61,6%), the two other fields (besides Medical Sciences) closest to Engineering. To make matters worse, the latter report also states that there is a definite move away from Science and Technology towards Business, Commerce and Management (2005: 27). These trends do not auger well for a system already experiencing critical shortages, especially if account is taken of the need to achieve the Millennium Development Goals (MDGs) and associated poverty eradication. The **State of Skills in South Africa** report furthermore only dealt with training in the private sector – public sector training (e.g. by LGSETA) was not addressed in this research.

7.2.3 Gaps in capacity building initiatives

a) Focus on short term capacity building and training initiatives

The pressure put on municipalities to meet water and sanitation service delivery targets has lead to a focus on short term training interventions with limited attention paid to long term capacity building and training needs of the water services sector. Consequently, due to the high turnover of skilled personnel from municipalities, the sector continues to be faced with the shortage of skilled personnel. Not much attention has been paid to ensuring that tertiary institutions are producing

graduates with the skills required by local government sector. The critical shortage of scientists and engineering professions may be regarded as a symptom of the limited attention paid to long term technical training of engineers and scientists. Unfortunately, acquisition of science and engineering skills requires many years of formal training and cannot be acquired by attending short courses.

b) Limited use of established tertiary institutions in skills development and training

Although individual municipalities have established partnerships with tertiary institutions, there is no evidence that the LGSETA has formal training partnerships with established tertiary institutions. These institutions have an important role to play in meeting the human resource needs of South Africa, especially in science and engineering.

c) Change from apprenticeship to Learnership system

An additional problem identified during interviews with sector stakeholders is the decline of the *apprenticeship system* in favour of the more recently implemented Learnerships. While there had been in the order of 33 000 technical apprentices in 1975, there have been only 3 000 since 2000. While Learnerships have, inherently, been designed to equate apprenticeships in a more structured manner, the lag in the goal-directed implementation of technical Learnerships serves to severely compromise the availability of technicians and tradesmen in all fields.

d) Historic teaching inequities

Deficiencies in the skills development and training system are compounded by the historical inequalities and injustices associated with the deliberate inattention to adequate schooling, especially in mathematics and science to black learners. A significant proportion of mathematics and science teachers, schooled within this deficient system, suffer basic disadvantages which negatively impact existing schooling being provided in these subjects. This means that the acquisition of basic competencies, essential for students in engineering and many other technical fields, is still being compromised in many instances.

e) Affirmative educational strategies

The desirable quota-based initiatives (specifically in the professional and technical fields) for ensuring rapid transformation within tertiary education institutions create conflicting requirements with measures aimed at escalating the total numbers of students in these fields. In addition, exit numbers are compromised by the reportedly high levels of previously disadvantaged students who fail to complete professional and technical courses. At present it is reported that in the order of 50% of first year students fail or drop out.

f) Lack of M&E of the impact of capacity building initiatives

From the review, there is no evidence that either the LGSETA or the ESETA have systems in place to monitor the impact of the training provided on productivity and its contribution to the improvement in the performance of municipalities. There is, therefore, no real way in which it can be measured that existing skills development initiatives lead to improved workplace-based competency and productivity.

g) Workplace capacity to implement Learnerships

Learnerships offer an essentially sound mechanism for ensuring outcomes based competency development. Part of the strength of the approach is that the practical skills development component is workplace-based, leading to potentially solid practical competencies. However, an essential underlying assumption is that there will be sufficient skilled resources in place to ensure that workplace training and assessment can take place. This includes the availability of sufficient skilled workplace-based coach/mentors and assessors.

Given the severe lack of capacity within municipalities, this resource intensive approach of 'learning by doing' causes practical difficulties in implementation and raises resistance amongst already overstretched personnel. While such problems can be addressed effectively over time, they hold

practical implications for the roll-out of the process as well as the support mechanisms that will need to be in place.

h) Deficits in policy alignment and linked cooperative governance approach

Effective skills development to address the South African context (broader socio-economic needs, skills portability, redress, etc.) is dependent on a workable cooperative governance approach. This includes the need to ensure a far greater alignment of policies of government departments, coordination of activities towards a coherent vision, defined outcomes and goal-directed mechanisms to ensure execution of joint responsibilities. Numerous examples exist. These include the fact that sanitation delivery is seen as a local municipal function but that the essential associated Health & Hygiene Promotion-related activities are a district municipal function. Clearly district and local municipalities will need to engage in joint planning and execution for delivery.

7.3 GENERAL TRENDS IN SKILLS REQUIREMENTS

7.3.1 Municipal Skills Profiles

A few common trends confirmed by this and other studies is that, in general, as one moves from Group 1 municipality through to Group 4 metros:

- ❖ Skills levels of staff increase;
- ❖ Understanding among municipal officials regarding local government powers and functions increases;
- ❖ The adequacy of human resources systems in the municipality increases;
- ❖ Qualification levels of management increase (in Group 1, the majority of municipal managers have a Matric with diplomas or lower qualifications; in Group 4, the majority of municipal managers have post graduate degrees);
- ❖ The municipal organogram more closely conforms to the functions to be performed by the municipality;
- ❖ Average operating budgets increase;
- ❖ Grant dependency decreases;
- ❖ Experience levels of councillors increase;
- ❖ Demands on ward councillors tend to become lower;
- ❖ Unemployment rates and indigence levels in communities within its area of jurisdiction decrease; and
- ❖ The demand for community participation tends to decrease and the mechanisms for the achievement thereof becomes more sophisticated (e.g. electronic information dissemination).

The needs within the municipalities classified as Groups 1 through to Group 3 relate to an acute shortage in the numbers of appropriately qualified personnel, especially within the intermediate and high skills categories.

On the other hand, a specific challenge faced by the larger urban areas is the need to provide water and sanitation services within informal settlements. There has been a significant rise in urbanization within South Africa in the past decade with a rapid increase of informal housing in urban areas. While there has been close on a 100% increase in the incidence of informal housing in rural and urban South Africa for the period 1995 to 1999¹⁴, 97% of these informal houses occur in the urban settlement context.

¹⁴ National Housing Trust, 2001.

It is clear that all municipalities, irrespective of grouping, require that on the job skills development is instituted in a coherent and goal-directed manner as a matter of urgency.

7.3.2 Skills Development Pipeline

Skills development should form part and parcel of a life-long learning approach. As such, it involves a 'delivery pipeline' that starts at pre-school level, continues through primary, secondary and tertiary levels and is further developed and refined towards full capability within the workplace. This is graphically represented in the diagram below. Within South Africa severe problems have been identified in respect of each of these components of the delivery pipeline. This creates a progressive system of 'bleed off' throughout the General, Further and Higher Education and Training Bands. As with all other things, it is the poor and disadvantaged group that has the least resource base to escape the inherent deficits of the system.

It is clear that necessary and focused interventions in any one segment of the 'pipeline' will lead to improvements. However, it is clear that sufficiency will only be achieved if the public and private sector – together – actively seek solutions that will promote coherent strategies and an integrated approach to the development of the South African human capital resource base.

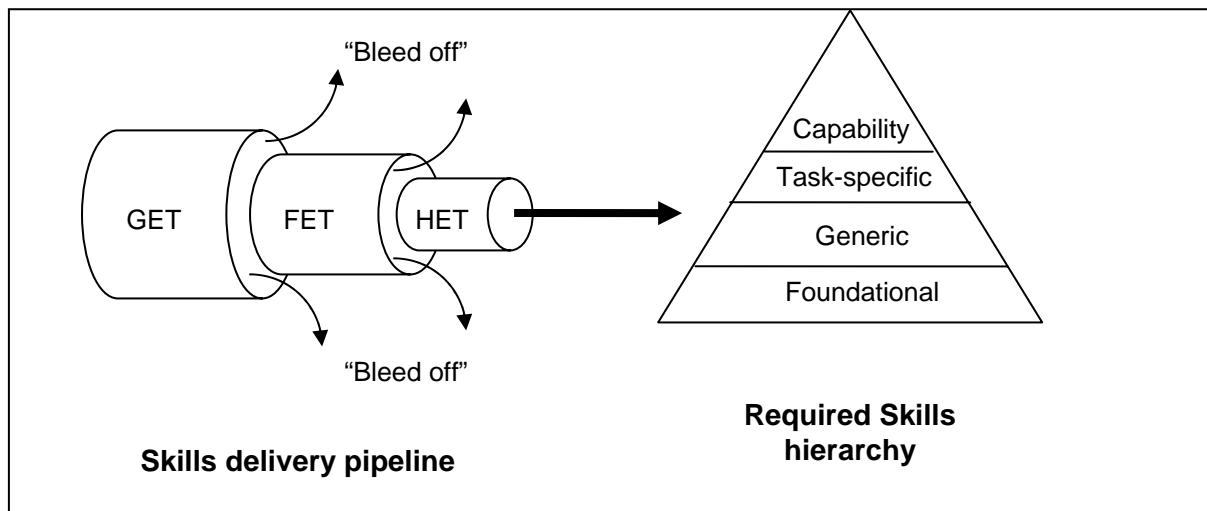


Figure 9: Skills Development Pipeline

CHAPTER 8: RECOMMENDATIONS

8.1 INTRODUCTION

It is clear from the above discussion that the existing skills base within WSAs is severely compromised as a result of insufficient staff as well as significant deficits in appropriate water and sanitation related skills amongst personnel.

Based on the findings of the assessment of training and capacity needs for the water services sector, the following recommendations for addressing the problem of skills shortage in the water services institutions are made:

8.2 A COORDINATING BODY FOR TRAINING & CAPACITY BUILDING IN THE WATER SECTOR

Poor coordination of training and capacity building for the water sector has been identified as a major contributing factor to the skills shortage problem. It is recommended that the establishment of a coordinating body for training and capacity building for the water sector should receive high priority. The responsibility of a coordinating body could be assigned to an existing institution or a new national coordinating body which could be established and placed within an existing entity. This body should lead and oversee all the training and capacity building for the water sector and it should have the necessary authority to give effect to its mandate (it should have 'teeth'). It should be responsible for the following:

- Consultation of all the key stakeholders in order to ensure effective coordination of training and capacity building for the water sector.
- Monitoring progress in the reduction of skills shortage and evaluation of the impact of training on sector performance.
- Mobilizing resources necessary to accelerate skills development within the water sector.
- Facilitation of the establishment of training partnerships with tertiary institutions and other training service providers.
- Ensuring that the LGSETA and the ESETA and its Water Chamber cooperate with tertiary institutions so that these institutions can develop relevant training programmes needed to fill the identified skills gaps in the water sector institutions.
- Ensuring that the provision of water and sanitation Learnerships is accelerated.
- Investigate the feasibility of reviving of the apprenticeship system as an intervention for accelerating technical skills development for the water sector.

8.3 THE NEED FOR SHORT-TERM SOLUTIONS

The solution to the growing shortage of skills in South Africa will need to be addressed by escalating training initiatives to ensure sufficient numbers of skilled resources. However, such initiatives will - in large part - require long lead-in times. There is a need to ensure that effective short- to medium-term solutions are identified in the interim. A number of potential interventions have been identified. These include:

1. The need to ensure that existing incumbents within WSAs and WSPs are supported to function maximally.
2. The associated need to ensure that national and provincial government departments have sufficient capacity to provide the necessary support to municipalities in the interim.
3. Planning for the amalgamation of local WSPs into larger amalgamated WSPs should continue. At the same time, it must be realised that such an initiative will have far-reaching implications in terms of skills requirements. The planned shared authority and joint management of a regional WSP by a number of WSAs would require sophisticated skills in terms of inter-institutional

coordination. In addition, the creation of regional WSPs would also affect the types of skills required within the institution to ensure effective functioning.

4. Initiatives such as those being implemented by SAICE in respect of strengthening professional and technical skills are monitored and constraints identified and addressed on an ongoing basis. This includes the elimination of duplicate programmes or the introduction of mechanisms to ensure coherent integration of different initiatives.
5. Public Private Partnerships (PPPs) potentially offer mechanisms that can assist in speeding up service delivery in a manner that incorporates poverty alleviation. At the same time, PPPs will only allow such improvements if appropriate regulation takes place. This is especially true in the case of monopolistic services such as water. Unless the appropriate skills and capacity are available, the danger exists that poorly structured PPPs could compromise the goals of social equity.

8.4 ENSURING SETA ADEQUACY

The existing capacity constraints within the LGSETA as well as the ESETA's Water Chamber must be addressed as a matter of urgency. More human and financial resources should be mobilized to strengthen the capacity of the Water Chamber so that it can perform its function more effectively and efficiently. Adequate skills development funds must be allocated to both the LGSETA and the ESETA so that it can accelerate the implementation of sector skills development programmes.

8.5 MUNICIPAL CAPACITY AUDITS

There is a need to ensure that reliable municipal institutional profiles, based on fairly rigorous data, are obtained. Without such an audit, goal-directed actions based on coherent capacity building strategies and programmes will remain problematic. Whilst it has been the intention that municipal Workplace Skills Plans would be the vehicle for such an auditing function, this has not materialised. This planning process will need to be strengthened or effective alternative audit mechanisms will need to be introduced.

8.6 LOW, INTERMEDIATE AND HIGH SKILLS

Separate but fully aligned strategies will be required to ensure that skills development will coherently address the particular needs as well as impediments associated with each of the low, intermediate and high skills levels.

Developing skills whilst growing the economy will require strengthened government-led initiatives aimed at stimulating a demand for high level skills. At the same time it will be necessary to actively drive mechanisms for ensuring a progression from low to high skills levels through portability of outcomes. As an example, the current deficits in the implementation of Learnerships impede the necessary progression for low skilled workers into higher skills bands. It is understood that the relevant SETAs face severe resource challenges that hamper the current implementation process. In addition, the real danger exists that the proposed re-engineering and alignment of SETAs with ASGISA, while essential, will impede progress even further unless there is goal-directed support from national government.

8.7 OVERARCHING HUMAN RESOURCE DEVELOPMENT OBJECTIVES

The shortage of skills within the water services sector mirrors the current situation at national level where skills deficits, in particular within the professional, managerial and technical categories, impede national economic and developmental objectives. While there are specific and unique impediments to skills development within the water sector that will require directed attention, strategies for the sector cannot be divorced from the national skills development context. A key requirement in this regard is to ensure alignment with the initiatives envisaged under ASGISA.

8.9 ALLOWING MULTI-ANNUAL SKILLS DEVELOPMENT INITIATIVES AND ASSOCIATED BUDGETS

Despite the availability of funding and what appears to be high demand for training interventions, the majority of regions show an under spending of allocated training budgets. There are a number of reasons for this dichotomy. One of the prime causes appears to be the fact that funding approval is frequently delayed until the latter part of the financial year. Such delays in approval mean that training initiatives are “crammed” into the remaining part of the financial year. Ironically, because of similar budgetary approval constraints in respect of infrastructure development projects, the period available for training coincides with the time when municipal officials are busy trying to fast-track project implementation. In practical terms the consequences of this budgetary process results in inappropriate persons attending training (because the targeted persons are “too busy”), insufficient workplace support, truncated training modules that do not meet practical mentoring requirements needed to ensure the desired competency outcomes, etc.

A large number of issues specifically related to finances will require greater in-depth analysis and the provision of sustainable guidelines. These include factors related to current under-spending as well as mechanisms and channels for funding accelerated delivery of skills development initiatives at local level. A coherent and consistent national policy must be developed - in collaboration with the Department of Finance - setting out priorities, spending frameworks and guidelines. Funding mechanisms and channels will need to ensure that money for training programmes will be available timeously, that replenishment of funds is addressed and that mechanisms are in place to protect flow and to stabilise variability. This includes the need to ensure that funding and financial mechanisms are in place to ensure accelerated delivery.

8.10 URGENT SKILLS DEVELOPMENT REQUIREMENTS

Specific recommendations are formulated in respect of the following skills and capacity gaps that require urgent intervention. Skills development funds should be allocated to all staff members irrespective of their age in order to improve the skills of all employees in municipalities.

8.10.1 Engineering and technical skills

A water and sanitary engineering training programme should be launched to address the current lack of training in small water supply systems and alternative sanitation technologies in South Africa. This recommendation should be referred to the Department of Education and Council for Higher Education for consideration.

8.10.2 Health and hygiene practitioners and health promoters

In order to address the shortage of health and hygiene practitioners and health promoters in rural municipalities, more resources should be allocated to the training of Community Health Workers (CHWs) and health promoters. Adequate numbers of Environmental Health Practitioners (EHPs) must also be trained to ensure that all rural municipalities have the necessary capacity to mentor and supervise local health promoters and CHWs. This recommendation should be referred to the Department of Health for support.

8.10.3 Strategic management and leadership

Strategic management and leadership training programmes that are appropriate for the developmental local government environment should be developed and implemented. In particular, it is recommended that role-players from the InWEnt Amanzi Programme, the DBSA/Vulindlela Academy and the relevant SETAs develop action plans to address this aspect.

8.10.4 Financial skills

Training programmes are required to address the shortage of financial skills and to build the capacity necessary to ensure that municipalities comply with the requirements of the Municipal Finance Management Act. It is recommended that role-players from DBSA/Vulindlela Academy and the relevant SETAs initiate action in this regard.

8.10.5 Water Operators

The LGSETA and ESETA are required to ensure that the necessary resources and systems be allocated to ensure that a Water Operator Learnership Programme (from NQF levels 2 to 4) is implemented as a matter of urgency to promote adequacy within water and waste water treatment plants.

8.11 MOVING FORWARD

A large body of work exists that has served as basis for the development of action plans to address skills development within WSAs and WSPs. While it is understood that none of these offer 'complete solutions' they do offer a sufficient base to allow integration of various components, strategies and action plans to assist in a coherent strategy (or set of strategies) to move forward from. It has become essential to move forward.

However, an essential component of such moving forward should involve an assessment of the specific constraints that have impeded previous attempts to implement action plans developed thus far. Unless due cognisance is taken of such constraints and a planned approach to overcoming such constraints is adopted, the same problems will befall this and future attempts towards progress.

The findings and recommendations of this study should be discussed with the relevant water sector stakeholders so that appropriate implementation plans for addressing the weaknesses identified by this study can be developed.

8.12 SYNTHESIS OF GAPS AND RECOMMENDATIONS

The following Matrix provides a synthesis of the skills/capacity gaps identified and recommendations to address the gaps.

Table 17: Matrix of Skills/Capacity Gaps and Recommendations

| A. Skills/ capacity gaps | Analysis | Recommendations |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering professionals | <p>There is general shortage of engineering professionals in South Africa; consequently, the water sector struggles to compete with the private sector for the limited number of experienced engineers because of poor conditions of service in WSAs.</p> <p>It is estimated that approximately 4 000 engineers will be required to implement infrastructure development projects in the short to medium term</p> <p>An analysis of university courses offered by Civil Engineering Departments showed that the focus of sanitation training is on full waterborne sanitation technology; no programmes are offered on alternative sanitation technologies. This is a critical gap in view of the fact that the government is making large capital investment in dry sanitation systems for millions of households</p> | <p>Incentives must be developed to attract and retain engineers within the WSAs. In addition, special incentive packages must be developed to attract engineers to rural municipalities that have the highest water and sanitation service backlogs.</p> <p>All sector stakeholders should support the interventions already started by DPLG and SAICE to recruit retired engineers for mentoring and coaching junior engineers. Special programmes must be put in place to fast track on-the-job training for new engineers.</p> <p>A sanitary engineering programme should be launched in one of the universities to address this gap in order to train sanitary engineers with expertise necessary to implement alternative sanitation technologies.</p> |
| Technical skills | <p>Focus of technical training for the water service sector is on the lower echelons of technical staff such as plant operators and supervisors.</p> <p>Technical training provided is generic; it does not address the challenges faced by officials that operate in rural municipalities under very difficult conditions of poor institutional and environmental capacity. There is also a shortage of skilled trainers that can provide good quality technical training that is appropriate for meeting the skills and capacity needs of municipal employees.</p> <p>Courses addressing various aspects of water services delivery and water resource management are spread across different departments in most South African universities.</p> | <p>There is a need to develop Learnerships for graduates in order to bridge the gap between academic knowledge and practical job knowledge in the water services institutions.</p> <p>There is a need to provide customized training that takes the constraints faced by rural municipalities into consideration.</p> <p>Sector stakeholders must work in partnership with the relevant tertiary institutions to develop comprehensive training programmes that will produce the water professionals that have the skills necessary to implement the national water legislation.</p> |

Capacity Needs for the Water Services Sector

| | | |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Health and hygiene practitioners and health promoters | Although health and hygiene promotion is part and parcel of sanitation infrastructure delivery and providing this training, some sanitation infrastructure projects are neglecting this component of sanitation because of a shortage of health and hygiene practitioners. There is growing evidence that Community Health Workers (CHWs) are more effective in promoting H&HE; however, they need to be mentored by Environmental Health Practitioners (EHPs). | To address the shortage of health and hygiene practitioners in rural areas, more resources should be allocated to the training of more Community Health Workers. Adequate numbers of EHPs must also be trained to ensure that all rural municipalities have the necessary capacity to mentor and supervise CHWs at village level |
| Strategic management and leadership | Although there are several capacity building initiatives and training programmes that focus on management and leadership; several studies have cited the lack of strategic management and leadership as a gap in municipalities. The problem may be due to the generic nature of the training which is usually based on the private sector management model which may not be appropriate for the developmental local government environment under which municipalities operate. | There is a need to develop strategic management and leadership programmes that are appropriate for the developmental local government institutional environment. |
| Financial management skills | Lack of financial skills has been identified as a gap in most municipalities and this affects all levels from treasury to senior councillors. This situation has been exacerbated by the implementation of the Municipal Finance Act which requires municipalities to acquire a new set of skills necessary to comply with GAAP and GAMAP practices. | Training programmes are required to address the shortage of financial skills and to build the capacity necessary to ensure that municipalities are able to comply with the requirements of Municipal Finance Management Act. |
| Developmental local government skills | The additional role of local government as an agent for the promotion of local economic development and poverty eradication requires municipal employees with skills in community development and entrepreneurship. Currently, there are no training programmes that are addressing this skills gap for municipal employees responsible for managing development projects. | Programmes must be developed to accelerate skills development for municipal employees in community development, development planning and entrepreneurship. |
| Learnerships focus on lower staff categories | Learnerships developed so far for water and sanitation are covering NQF level 1 to 5. No Learnerships have been registered for post-graduate levels (NQF level 6-8). | There is a need to provide Learnerships for graduates; this might provide a short term solution to the shortage of skills because there are thousands of unemployed graduates in the technical fields who could benefit from Learnerships that prepare them for technical positions in water services institutions. |
| B. UNDERLYING FACTORS | | |
| Poor coordination of capacity building and training programmes | Currently, there is no coordinating body for education and training of water sector professionals required to implement the Water Services Act and the National Water Act | There is an urgent need for the establishment of this coordinating body; it should have representatives from the sector departments, SALGA, SAAWU, LGSETA, WISA, The Water Chamber, tertiary institutions and international donors. |
| Lack of M&E systems for assessing the impact of training on sector performance | The study found that different sector stakeholders have supported many training and capacity building initiatives but there are no studies conducted to assess the impact of these initiatives on sector performance. There are no indicators for monitoring progress in skills development. | There is a need to assess the impact of training and capacity building programmes that have been implemented so far so that successful approaches can be identified and scaled-up. |

Capacity Needs for the Water Services Sector

| | | |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poor quality of science and mathematics education at high school level | Poor performance of matriculants in mathematics and science limits the number of students that meet the entry requirements for faculties of science, engineering and health sciences. To address this problem, the Department of Education has launched the Dinaledi Schools for Science and Mathematics improvement. | The water sector in partnership with professional organizations and the Department of Education should launch campaigns and incentives for attracting high school students to consider following careers in water field. |
| Limited use of established tertiary institutions in skills development for the water sector | There is no evidence that LGSETA has established formal training partnerships with the tertiary institutions. However, the metros are making use of tertiary institutions in the skills development for their staff | The Water Chamber and LGSETA should establish formal training partnerships with the tertiary institutions so that they can provide the relevant training programmes needed to fill the skills gaps in water services institutions. |
| Lack of integration of donor funded capacity building initiatives | A review of donor funded capacity building programme showed that these programmes were usually not integrated into government funded programmes and this led to duplication and lack of continuity due to the project nature of donor funded programmes and the initiatives are discontinued at the end of donor funding. | There is a need to ensure that all donor funded training and capacity building initiatives are integrated into mainstream government funded programmes to ensure that they continue beyond the termination of donor funding. |
| Change from apprenticeship to learnership systems | The introduction of Learnerships has led to a decline in apprenticeship system. Some senior politicians believe that apprenticeships were more effective than the SETA's Learnerships because they integrated college level technician programmes with trade school learning | The Water Sector stakeholders should support the government's call for the revival of apprenticeships to address the skills shortage experienced in both public and private sectors. |
| Capacity constraints in the Water Chamber and LGSETA | <p>The Water Chamber suffers from inadequate human and financial resources to perform its functions of coordinating skills development for the water sector and facilitation of the cooperation of employers, employees and providers in the development of Learnerships and training delivery instruments.</p> <p>The LGSETA has a limited income stream; this negatively impacts on its ability to fund skills development on a large scale needed to address the skills shortage.</p> | <p>Resources must be mobilized to ensure that the Water Chamber has adequate capacity to perform its function efficiently.</p> <p>Adequate funds should be provided to LGSETA so that it can accelerate the implementation of sector skills development programmes.</p> |
| Skills development policy constraints | The national skills development policy stipulates that 80% of the skills development funds should be spent on people under the age of 35 years and the unemployed youth. This requirement marginalizes the older and more experienced staff members who would benefit most from the training and contribute a lot towards the improvement of performance of the municipalities. | Water sector stakeholders should lobby for a more equitable allocation of skills development funds to all staff irrespective of their age groups in order to improve skills of all staff members in municipalities. |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Changes in the local government legislation | New legislation has resulted in devolution of regulatory functions to water services authorities; this has necessitated acquisition of new skills sets by technical and management staff | Training programmes are needed to address the skills deficit in the regulatory roles of WSAs. |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|

CHAPTER 9: REFERENCES

- Atkinson, D., Buso, N. & Pienaar, D. (2003). *Municipal administrative restructuring in non-metropolitan areas*. Human Sciences Research Council. Retrieved from the Worldwide Web at www.hsrc.ac.za/research/output/outputDocuments/2814_AtkinsonMunicipaladministrativerestructuring.pdf
- Atkinson, D., Buso, N. & Pienaar, D. (2003). "Lessons regarding municipal restructuring in non-metropolitan areas".
- Beijer, W. (2002). *Developing a capacity building strategy for forest certification through the RAAKS Methodology*. Stoas international.
- Brown L. Undated. Local Government: Moving from training to skills development, Hologram Newsletter, <http://www.ksp.org.za>
- City of Johannesburg (2004) Integrated Development Plan 2004 www.jhb.gov.za
- CRC News and Review (December, 2002). *Ownership of Research*. Manchester, UK: Centre on Regulation and Competition.
- CSIR (2005). *The state of WS infrastructure and its management: A desktop strategic study*. Status Report: WS Infrastructure Asset Management Strategy Study.
- DBSA (2005). *Activities Report 2004/2005*. Development Bank of South Africa.
- DBSA (2005). *Annual Report 2004/2005*. Development Bank of South Africa.
- Department of Education. (2004). *Status report for the Learnerships for Local Economic Development (LED)*. Retrieved from the Worldwide Web at www.mpumalanga.gov.za/education/documents_publications/reports/led/statusled08.2004.doc
- Department of Labour. (2005). *State of skills in South Africa, 2005*. Pretoria: South Africa Department of Labour.
- DPLG. (2003). *Study into the Provision of Free Basic Water*. Department of Provincial and Local Government.
- DPLG. (2004). *National capacity building framework for local government*. Department of Provincial and Local Government.
- DPLG. (2005). *Local Government Skills Audit*. Department of Provincial and Local Government.
- DWAF (2004) *South Africa's Progress Report on Water and Sanitation*. Presented to the UN Commission for sustainable development Twelfth session, 14-30 April 2004, www.dwaf.gov.za
- DWAF (2001). *White Paper on Basic Household Sanitation*. South Africa Department of Water Affairs and Forestry.
- DWAF (2003a). *External Evaluation of the Water Services Sector Support Programme: Mid-Term Review Final Report*. South Africa Department of Water Affairs and Forestry.
- DWAF (2003b). *Strategic Framework for Water Services: Water is Life, Sanitation is Dignity*. South Africa Department of Water Affairs and Forestry.
- DWAF (2004). *Nation-wide Sustainability Audit of Sanitation Facilities*. South Africa Department of Water Affairs and Forestry.
- eThekweni Municipality (Undated) Siyaya Learnerships <http://www.learnership.durban.gov.za>
- Fraser, S. W. & Greenhalgh, T. (2001). Coping with complexity: Educating for capability. *British Journal of Medicine*, 6, pp. 799-803.
- Gibson, S. (2004). *The Forgotten Municipalities*. Paper presented at IMESA conference, Mossel Bay, October 2004.

- Integrated Consulting Management (2004) *Local Government Academy (LOGOLA): The Roadmap for the development of a national cadre of leaders for development local government*. Concept Paper.
- Jones, D. & Williamson, T. (2005). *Review of sector collaboration in the water services sector, South Africa*. Building Partnerships for Development in Water and Sanitation.
- Kitchin, F. & Ovens, W. (2005). *Local Government Skills Audit: Review of Existing Data and Reports*. Report for dplg's Chief Directorate: Local Government Leadership Academy. Pretoria: Department of Provincial and Local Government.
- Kraak, A., Lauder, H., Brown, P. and Ashton, D (2006). *Debating high skills and joined-up policy*. <http://www.hsrcpress.ac.za>
- Lawless, A. (2005). *Numbers & Needs: Addressing Imbalances in the Civil Engineering Profession*. South African Institute for Civil Engineering.
- LGWSETA. (2003). *Sector Skills Plan 2003-2005*. Local Government, Water and Related Services SETA.
- McDonald, D. A. (2002). No Money No Service: South Africa's poorest citizens lose out under attempts to recover service costs. *Alternatives Journal*, 28(2). Retrieved from the World Wide Web: (http://216.239.53.104/search?q=cache:1aPwfnE8C28J:qsilver.queensu.ca/~mspadmin/pages/Project_Publications/Journals/Money.pdf)
- Minister of Education, N Pandor. (2005) GCIS Parliamentary Media Briefing, <http://www.gov.za>
- Municipal Demarcation Board (2000). *Framework for the Assessment of Institutional and Financial Capacity*.
- Municipal Demarcation Board 2002 Water and Sanitation Sector Report
- Municipal Demarcation Board (2002).
- Municipal Demarcation Board (2004). Municipal Capacity Assessment (2003/ 2004). Retrieved from the Worldwide Web at www.demarcation.org.za
- National Housing Trust (2001). Press release.
- Parker, D., Kirkpatrick, C. & Figueira-Theodorakopoulou, C. (2005). *Infrastructure regulation and poverty reduction in developing countries: A review of the evidence and a research agenda*. Manchester, UK: Centre on Regulation and Competition, Institute for Development Policy and Management.
- Perold, J (2006). Personal e-mail communication.
- Plummer, J. (2002). *Focusing Partnerships: A Sourcebook for Municipal Capacity Building in Public-Private Partnerships*. London: Earthscan.
- Project Consolidate (2004). *A hands-on local government programme*. [http:// www.dplg.gov.za](http://www.dplg.gov.za)
- Reddy, P. S. (2006). *Education and training at the local level: A review of the South African experience in the first decade of democracy*.
- Republic of South Africa (RSA). (1996). Constitution of the Republic of South Africa. Act No. 108 of 1996. Government Gazette, South Africa.
- Republic of South Africa (RSA). (1997). Water Services Act. Act No. 108 of 1997. Government Gazette, South Africa.
- Republic of South Africa (RSA). (1998). Municipal Structures Act. Act No. 117 of 1998. Government Gazette, South Africa.
- Republic of South Africa (RSA). (1998). Skills Development Act. Act No. 97 of 1998. Government Gazette, South Africa.
- Republic of South Africa (RSA). (1999). Skills Development Levies Act. Act No. 9 of 1999. Government Gazette, South Africa.

Republic of South Africa (RSA). (2000). Municipal Systems Act. Act No. 32 of 2000. Government Gazette, South Africa.

Republic of South Africa (RSA). (2000). Municipal Structures Amendment Act. Act No. 33 of 2000. Government Gazette, South Africa.

SALGA (2005). *A skills development and capacity building initiative 2006-2011* (Draft Report). South African Local Government Association.

Schoeman G, Perold J, Vermeulen L and Williams S (2004). Strategic options to address constraints and challenges to skills development in the water services sector, Main Report prepared for the Skills Development Sector Committee of the Water Services Leadership Group.

Schoeman G, Perold J, Vermeulen L and Williams S (2004). Skills Requirements in the Water Services Sector. Report prepared for the Skills Development Sector Committee of the Water Services Leadership Group.

Schoeman G, Perold J, Vermeulen L and Williams S (2004). Available Skills in the Water Services Sector. Report prepared for the Skills Development Sector Committee of the Water Services Leadership Group.

Schoeman G, Perold J, Vermeulen L and Williams S (2004). Analysis of Skills Gaps in the Water Services Sector. Report prepared for the Skills Development Sector Committee of the Water Services Leadership Group.

Schoeman G, Perold J, Vermeulen L and Williams S (2004) Realising the Macro Strategy "Promotion of Water Services Delivery through skills development" – Report prepared for the Skills Development Sector Committee of the Water Services Leadership Group.

Schoeman G and Berry S (2005) Project "Gear-up"- Strategic assessment of sanitation related capacity needs of Water Services Authorities. Report prepared for the Department of Water Affairs and Forestry.

UNDP (1998). *Capacity assessment and development in a systems and strategic management context*. United Nations Development Programme: Technical Advisory Paper No. 3, Management Development and Governance Division, Bureau for Development Policy.

UNDP (2005). *Human Development Index*. United Nations Development Programme: Technical Report, Bureau for Development Policy.

Wits Enterprise (2004). Gap analysis (Deliverable 3 of Wits-DBSA study on training requirements of local authorities. Johannesburg: University of the Witwatersrand.

World Bank (2004). *Doing business in 2004: Understanding regulation*. Washington, DC: World Bank/Oxford University Press.

Water Research Commission (2005). Knowledge Review Report 2004/2005

CHAPTER 10: APPENDICES

10.1 APPENDIX 1: STATUS REVIEW OF CAPACITY BUILDING IN THE WATER SECTOR

REVIEW OF THE CURRENT STATE OF CAPACITY BUILDING AND TRAINING IN THE WATER SERVICES SECTOR

Prepared by: N Mjoli, Hlathi Development Services

March 2006

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Background

1.2 Objectives

1.3 Purpose of the document

1.4 Limitations

2. POLICY CONTEXT FOR CAPACITY BUILDING AND TRAINING

2.1 Relevant government policy and legislative framework

2.1.1 Policies

2.1.2 Legislation

2.1.3 Strategic Context

3. REVIEW OF SELECTED CAPACITY BUILDING STUDIES

3.1 Skills shortage in the civil engineering profession

3.2 Options for addressing skills development in the water services sector

3.3 Assessment of sanitation related capacity building needs of Water Services Authorities (WSAs)

3.4 Evaluation of the implementation of skills development policies

3.5 Capacity and skills required by the WSAs

3.6 Constraints to skills development and service delivery in local government sector.

3.7 Current capacity building initiatives for local govt in SA

3.7.1 USAID Local Governance Support Program

3.7.2 Learning network for District Municipality Water Services Managers

3.7.3 Local Government Leadership Academy (LOGOLA)

3.7.4 DPLG –Capacity building initiatives

3.7.5 eThekweni Municipality – Siyaya Learnership Programme

3.7.6 City of Johannesburg – Skills development initiatives

3.7.7 Development Bank of Southern Africa – Capacity building initiatives

3.7.8 The Northern Cape Operation & Maintenance Project

3.8 Capacity building and training initiatives for water resources management

3.9 CB initiatives of other sector departments

3.9.1 Department of Education

3.9.2 National Department of Public Works

4. KEY ISSUES EMERGING FROM THE REVIEW

4.1 Achievements

4.2 Weaknesses

4.3 Factors contributing to skills shortage in the water sector

5. RECOMMENDATIONS

6. CONCLUSION AND WAY FORWARD

7. BIBLIOGRAPHY

1. INTRODUCTION

1.1 Background

The South African Government has committed itself to an ambitious target of eliminating the water and sanitation service backlog by 2008 and 2010 respectively. However, the current skills shortage at local government level is posing a threat to the achievement of the sanitation target. The slow rate of delivery is largely due to inadequate technical skills in most rural municipalities with the highest sanitation backlog figures. The outbreak of typhoid experienced in Mpumalanga in 2005 highlights the importance of water quality management and emphasizes the need for technical capacity to monitor the drinking water quality on a regular basis in order to protect public health.

President Mbeki in his State of the Nation Address of 2005 highlighted the importance of skilled human resources in the fight against poverty and underdevelopment that faces our country:

"It is however clear that more work will have to be done to raise the skills level of our people. Accordingly, the government has approved a new National Skills Development Strategy for the period 2005-2010. R21.9 billion over five years will be allocated to fund this strategy, which will include improved cooperation between the SETAs on one hand and the Further Training and Education colleges and institutions of higher education on the other."

The lack of skills is not limited to the water services sector; the water resources management sector is facing a similar problem. South Africa has a very progressive National Water Act which has received international accolades but the challenge is how to turn the good intentions of the water law into sector practice. In terms of the Act new, water management institutions such as Catchment Management Agencies and Water User Associations have been established. These institutions have been established to bring water resources management closer to the local level. This is a radical change from the past water management approach which was mainly focused on technical aspects, the new water law advocates for an integrated approach that includes a focus on ecological, social and economic perspectives of water resources management.

Definition of capacity (National capacity building framework for local government, 2004)

Capacity within the context of municipality has three components which must be in place to achieve functional institutions.

Individual capacity- refers to the potential and competency found within a person which is reflected as specific technical and generic skills, knowledge, attitudes and behaviour accumulated through education, training, experience etc.

Institutional capacity- is the potential and competency found within organizations. It includes human resources, strategic leadership, organizational purpose, support systems, infrastructure, financial abilities etc.

Environmental capacity – is the potential and competency found outside of municipalities formal structures. It includes socio-economic factors (tax base), demographic composition, political, legislative, social capital, natural resources etc.

1.2 Objectives

The overall goal of the project is to review the current state of capacity building in the water sector, to compile an inventory of water sector training courses offered by public and private training providers and to assess the capacity needs for Water Services Authorities, Water Boards, Water Services Providers, Catchment Management Agencies, Water Sector Regulators and Researchers.

1.3 Scope and purpose of the document.

This document presents a review of the policy and legislative context for skills development, education and training in South Africa with a special focus on aspects that are relevant to the water sector (water services and water resources management). A review of selected water sector capacity building studies undertaken during the last five years is presented. A brief review of current initiatives that are being undertaken by the water sector institutions and their partners to address the current skills shortage in the water sector. The report highlights achievements and

weaknesses in skills development and makes recommendations for addressing the problem of skills shortage.

1.4 Limitations

The status review is not comprehensive because it was not possible to access all reports on capacity building and training initiatives in the water sector because of the timing of the project during the festive season when most of the officials are on leave. The review is based on documents that are available from the internet. The report will be refined once all key stakeholders have been consulted.

2. POLICY AND LEGISLATIVE CONTEXT FOR CAPACITY BUILDING AND TRAINING

Since the democratic government took over in 1994, a plethora of policies and pieces of legislation have been put in place to create an enabling environment for the development of the skills and human resources necessary to implement government's policies. Several institutions have been put in place to address the skills shortage in all spheres of government, industry, business and services delivery sector. However, in spite of the enabling policy and legislative environment, the country is still faced with skills shortage especially in science, engineering and technology arena. This skills shortage is threatening sustainable delivery of services to the people of South Africa.

2.1 Relevant government policy and legislative framework

This section provides a brief overview of policies, pieces of legislation and strategic documents that pertain to skills development and training within the water sector and the local government sector.

2.1.1 Policies

White Paper on Public Service Training (1998)

White Paper on Public Service Training (1998) provides a national strategic framework on training and education for public servants and contributes to the transformation of the public service. It aims to align public service training and education to global trends in human resource development and the national strategic policy context.

White Paper on Local Government (1998)

The White Paper on Local Government (1998) acknowledges the importance of skills development in ensuring that municipalities acquire the necessary capacity to deliver basic services to communities. In terms of this policy, a national local government training system has been established to capacitate the municipality administration to meet its development challenges. The Local Government Sector Training Authority (LGSETA) has been established as a single coordinating body for local government training. LGSETA is responsible for managing a local government education and training fund built from the proceeds of the National Skills Fund as levied from local government. It is also responsible for allocating funds to provincial training structures, setting of national training priorities, establishment of standards, accreditation of training providers and providing trainee certification.

National Water Policy 1997

The National Water policy recognizes the importance of training and development of skilled personnel in the achievement of efficient water resource management. In terms of this policy, capacity building should not be limited to DWAF but should be extended to all organizations and agencies with a responsibility for water resource management at all levels. DWAF should establish links with tertiary education and other training institutions in order to ensure that water managers receive the necessary skills and capacity required to support the implementation of the new water policy. Capacity building initiatives should also be extended to women and other marginalized groups.

Legislation

The three main pieces of legislation that are driving skills development in South Africa are the South African Qualifications Authority Act (SAQA), the Skills Development Act and the Skills Development Levies Act. A brief overview of these laws is provided below.

SAQA Act (1995) - This Act creates a single unified system for education and training qualifications in South Africa. It also creates the institutions necessary to ensure that these qualifications are of high quality. The National Qualifications Framework (NQF) has been established to provide a framework within which the quality of all learning can be assured whether it takes place at school, in a workplace or at home. It also makes provision for the recognition of prior learning (RPL), i.e. skills acquired outside the context of a formal course is acknowledged. The Act makes provision for a future where life-long learning is the norm for all citizens. The approach to acquiring skills is outcomes based training, i.e. focus is on what trained people can practically offer rather than the training inputs they have received.

Skills Development Act (1998) – It underpins human resource development in the Public Service. It aims to improve delivery of social services by providing employees with skills necessary to deliver social services effectively. The purpose of this Act is to develop skills for the workplace and promote employment prospects for all citizens. The aims of the legislation are to be achieved in the following ways:

- Development of training programmes that provide learners with qualifications that are recognized in the National Qualifications Framework and these programmes must be registered with SAQA;
- Learnerships that integrate theoretical and practical learning and these are decided and owned by the SETAs. Each learnership is a structured programme of learning that leads to a qualification;
- Appointment of Skills Development Facilitators in all organizations, these are responsible for the facilitation of training in a workplace;
- The establishment of SETAs responsible for guiding and coordinating of skills development in all sectors of the economy of South Africa.

Skills Development Levies Act (1999) - This Act makes provision for the funding of the skills development programmes. It legislates that all companies employing 50 or more people and whose total wage bill exceeds R250 000 per year are required to pay a levy of 1% of their wage/salary bill towards the skills development fund.

In terms of this legislation, all municipalities are required to annually submit their Workplace Skills Plan (WSP) to the LGSETA. The WSP provides information on current skills profile and development needs of all municipal employees, future strategic priorities of the municipalities and a Workplace Skills Plan to ensure that municipal employees are trained in the skills needed to achieve the strategic priorities.

2.1.2 Strategic context

The National Skills Development Strategy of 2001

This strategic document makes provision for a new system of learning which combines structured learning and work experience that culminates in a recognized qualification within the National Qualifications Framework. Through this strategy, the government together with employers, labour and other stakeholders aim to improve employability of the country's workforce.

National Skills Development Strategy 2005-2010

This strategy of the Department Labour spells out the national priority areas to be funded with more than R21.9 billion over the next five years. Its vision is skills for sustainable growth, development and equity.

The Strategy is based on the following principles:

- Support of economic growth for employment creation and poverty eradication;
- Promotion of productive citizenship for all by aligning skills development with national strategies for growth and development;
- Acceleration of Broad Based Black Economic Empowerment and Employment Equity;
- Support, monitoring and evaluation of the delivery and quality assurance systems necessary for the implementation of the NSDS;

- Advancement of the culture of excellence in skills development and lifelong learning.

Objectives of the NSDS include the following:

- Prioritizing and communication of critical skills for sustainable growth, development and equity;
- Promotion and acceleration of high quality training for all employees in the workplace;
- Promotion of employability and sustainable livelihoods through skills development;
- Assisting designated groups including new entrants to participate in accredited work , integrate learning and work-based programmes to acquire critical skills to enter the labour market and self employment;
- Improvement of the quality and relevance of training programmes.

Strategic Framework for Water Services (2003)

The capacity building objectives of the support framework for water services institutions include the following:

- Ensuring the establishment of functioning, capable, effective water services institutions;
- Development of adequate skills and competencies required in the water services sector;
- To enable all sector role-players and partners to fulfil their roles in water services delivery.

The support is provided using several mechanisms such as the DPLG Capacity Building Grant, knowledge networks, advisory services, guidelines and tools, strategic support initiatives and skills development. Research plays an important role in the implementation of the support framework.

The skills development strategy for the water services sector addresses the acceleration and expansion of formal and structured training and education programmes in the following priority areas:

- gaps between the existing and required levels of competence to plan, implement, operate and maintain water services infrastructure;
- the shortage of skilled personnel, management capacity and accredited training providers.

In terms of the SFWS, DWAF and Local Government Water and related services SETA (LGWSETA) must assume responsibility for leadership and co-ordination of education, training and capacity building in the water services sector. The LGWSETA is responsible for the following functions:

- Regulation of training in the local government and water sector by setting standards for quality assurance, accreditation, recognition of prior learning and assessment of training activities;
- Coordination of training provision;
- Development of sector skills plan and skills development strategy;
- Collection and evaluation of workplace skills plans of water services institutions;
- Development, registration and management of learnerships.

LGWSETA Sector Skills Plan 2003-2005

The Sector Skills Plan addresses the main internal and external factors that impact on the local government and the water sector and the shortage of skills faced by the water services sector. The Sector Skills Plan identified specific scarce skills in the local government sector (senior

management, professional and technicians) and water sector (water scientists, technicians, water and sewage works operators. This document noted that shortage of skills was most acute in rural and peri-urban municipalities.

The plan has identified the following skills that are required:

- Leadership and management development;
- Generic skills (ICT, Communication skills, analytical skills, interpersonal skills and conflict management)
- Technical skills (Engineering professionals and scientists).

As part of the process of developing the Sector Skills Plan, an assessment of the quality and quantity of training provided to local government was undertaken. This assessment showed at least 20% of LG labour force received training in 2001/2002 but the training focused on the lower echelons of the occupational categories. There was also dissatisfaction with the quality, relevance and impact of training provided. The assessment identified the following constraints to the delivery of quality and relevant training to the LG and Water Services sub-sector:

- Lack of funds for training in smaller and rural municipalities;
- Lack of commitment and support for training from line managers and supervisors;
- Lack of post-training support for learners to apply their new skills in the work environment;
- Limited time available for training, especially time off from work for attending training programmes; this is exacerbated by the pressure on municipal officials to meet the service delivery targets.
- Poor learner motivation due to a lack of career planning within the workplace;
- Lack of ability to meet the requirements of the new outcomes-based education and training systems, alignment with the NQF and implementation of skills programmes and learnerships;
- A lack of relevant accredited training programmes;
- A lack of formal structured workplace training was cited as a major problem for the sector. No skills available to facilitate on the job-learning, coaching and mentoring.

National Capacity Building Framework for Local Government (DPLG & SALGA, 2004)

This framework aims to:

- build on the foundation of ongoing capacity development undertaken by sector partners;
- provide a set of overarching strategic goals for ensuring a common focus;
- provide a framework a package of support based on priorities identified by municipalities;
- identify and ensure a more enabling environment for capacity support;
- define the impact that must be made by the year 2010.

The framework for capacity building addresses the challenges faced by local government through the following:

- Providing a clear vision of developmental local government;
- Identification of the following strategic areas for national capacity building:
- Municipalities must have capacity to develop their own systems; have adequate human and financial resources and infrastructure to deliver services;
- Increased skills to meet the development challenges;
- Strong political, strategic and managerial leadership.

The following capacity problems are to be addressed:

- Inadequate resources, skills, knowledge and leadership;
- Increasing capacity gap with regards to meeting service delivery demand and development requirements;
- Lack of minimum individual and institutional capacity in the weakest municipalities;
- Lack of capacity to implement developmental local government;
- Lack of incentives to build capacity.

3. REVIEW OF AVAILABLE REPORTS ON TRAINING AND CAPACITY BUILDING FOR THE LOCAL GOVERNMENT SECTOR

3.1 Skills shortage in the Civil Engineering Profession

Lawless (2005) in her report on “Numbers & Needs: Addressing imbalances in the civil engineering profession,” highlights the following challenges that must be addressed in order to build the civil engineering capacity required by local government and other industries that employ civil engineering professionals:

- Poor performance of high school children in Matric Maths, Science and English which are prerequisite for admission to engineering disciplines, medicine, accounting and natural sciences;
- High drop-out of science and engineering students before graduating from tertiary institutions; this is as high as 70% in some institutions;
- The graduates who make it to the workplace are still faced with a challenge of lack of mentorship because the few available civil engineers are over stretched therefore do not have time to mentor juniors and in some local municipalities there are no civil engineers.
- Poor retention of civil engineers in the workplace due to unfavourable conditions of service and lack of incentives to retain civil engineers in the public sector.

Lawless (2005) has drawn the following conclusions from her audit of the number of civil engineering professionals in the local government sector:

- The audit revealed a critical shortage of experienced civil engineering professionals especially in the mid-career civil engineers responsible for production work;
- A short term solution to this problem is to reverse the loss of senior engineers due to retirement or early retirement to create space for affirmative action candidates.
- Long term approach requires training in the critical subjects from kindergarten to matric levels in order to increase the number of students who meet the entry requirements for engineering and natural sciences.
- Retired engineering professionals should be engaged to assist with the mentoring and coaching of the inexperienced pool of young civil engineering at the entry level of their career;
- Special efforts must be put in place to recruit South Africans based abroad to return and fill up the skills gaps that have been created.

The Lawless report cautions that if the recommended interventions are not implemented, the status quo will get worse and this will impact negatively on the government's ability to meet the delivery targets and address the poverty challenge.

3.2 Options for addressing skills development in the Water Services Sector

Schoeman et. al (2004) in a report prepared for the Skills Development Sector Committee of the Water Services Sector Leadership Group entitled “Realising the Macro Strategy- Promotion of Water Services Delivery through Skills Development”, set out the strategic interventions that will be required to address the constraints and challenges to water related skills development in Water Services Authorities (WSAs) and Water Service Providers (WSPs). The study developed a

planning framework matrix that provides information on specific outcomes and tactical objectives that are needed in order to realize the Macro Strategy of the Promotion of Water Services Delivery through skills training". The report proposes the following key focus areas and the associated tactical objectives to address constraints to skills development for the water services sector:

- *Effective Skills Development and training* – this identifies all the components that must be in place to support skills development.
- *Supporting institutions to create an enabling environment for effective skills development and training* – this calls for better coordination within and between institutions at all levels, need to fast track requirements for skills development and training, optimal use of external expertise and a need for LGWSETA to deliver according to requirements and standards.
- *Skills Development & training to be translated into improved organizational performance and service delivery* – this requires post-training support, retention of trained and skilled staff, incentives for improved performance, attention should be paid to all levels of capacity building, at individual, organization levels and creation of an enabling environment and sufficient resources must be in place to enable skilled staff to perform their functions (budgets and support infrastructure).

3.3 Assessment of sanitation related capacity building needs of Water Services Authorities (WSAs)

A DWAF study by Schoeman and Berry (2005) conducted as part of the Gear-Up Sanitation Project assessed 170 municipalities that have been granted a water services authority status and found that a lack of capacity and skills at municipal level was a major constraint to the acceleration of sanitation service delivery. The skills shortage was due to a high turnover of skilled personnel from municipalities and the rapidly changing local government legislative environment which puts more demands on municipalities. The study identified skills shortage in the following areas:

Inadequate understanding of functions - Many WSAs do not have an adequate understanding of the functions that they are required to perform:

- About a quarter of WSAs that have been authorized to perform the sanitation function were not aware of this fact;
- Approximately a third of all WSAs did not have access or use the national sanitation policies that outline their responsibilities.

Poor planning and management – Effective execution of the WSA function was hampered by a shortage of management skills. Operational plans lacked time frames and a lack of ability to access available resources.

This DWAF study highlighted the following areas of poor performance:

- *Strategic planning* – Lack of strategic direction for sanitation service delivery in WSAs was due to a lack of vision and leadership at the municipal level. Approximately 50% of the WSAs did not have approved Water Services Development Plans (WSDPs) and more than a third did not have a Workplace Skills Plan in place.
- *Governance* – More than 50% of the WSAs surveyed did not have sanitation by-laws in place and the WSAs that had contracted the sanitation function to other organizations did not have service level agreements in place.
- *Operation and maintenance* – The study found that the existing sanitation infrastructure was not properly operated and maintained by most WSAs.
- *Monitoring and evaluation* - Most of the surveyed WSAs did not have any M&E system in place for assessing the current level of performance. The focus of monitoring was on quantitative indicators, i.e. number of toilets built, people served and budget spent.

This study made the following recommendations for strategic interventions required to address the capacity and skills gaps identified:

Strengthening of the capacity of DWAF – The National Sanitation Programme must be strengthened to provide support for the implementation of an integrated sanitation programme at the municipal level

Optimizing existing WSA capacity – Use of a combination of in-house skills development and mentoring to address the priorities of the WSAs, for example, the current Amanzi Management Training of InWent serves as a holistic system to overcome administrative and technical operational constraints in WSAs.

Development of recruitment and retention strategies – Appropriate strategies must be developed for the recruitment and deployment of municipal personnel within the identified occupational categories.

Providing on the job training within WSAs – Each WSA must identify key personnel for training in areas of policy review, financial and project management; sanitation technology and H&HE promotion.

Building a sufficient municipal skills base – The following activities are recommended for addressing the skills shortage:

- Ensuring a coherent skills development approach – This requires well targeted training programmes;
- Ensuring implementation of the Local Government Learning Academy (LOGOLA). This programme plans to provide 10 000 councillors and managers with individually-based mandatory training over the next three years in order to build a competent leadership cadre.

3.4 Skills gap analysis for local authorities (LAs)

The Development Bank of Southern Africa undertook a study (2004) to assess the skills gap in the local authority sector as part of a process of the identification of niche training areas for the Vulindlela Academy. The study started by analyzing the supply of training for Local Authorities. This analysis showed that there was no shortage of training providers but the problem was quality and appropriateness of the courses provided. The following general problems with the training provided were identified:

- Training did not lead to appropriate behavioural change;
- The need to conform to LGWSETA standards made it difficult for service providers to offer hands-on training which would lead to job behavioural change;
- The very low levels of skills at municipal level make it difficult to train people who lack the requisite entry-level qualification.

The DBSA study identified the following training and skills gaps in Local authorities:

Financial training gap

This is the biggest gap expressed by most municipalities of all categories and this is exacerbated by the requirements of the Municipal Finance Act. The skill shortage is found at all levels from treasury to senior councillors.

The areas that require attention include short term training in municipal finance; long term training to upgrade the financial qualifications of key officials and financial literacy for the non-finance officials and councillors. In addition, there is a need to improve the financial administrative skills of administrative staff and financial and legislative awareness for officials and councilors.

Institutional and human resource development training gap

The following five key gaps were identified:

- Strategic management and leadership is seen as the greatest challenge for local authorities. There is a need to improve the quality of the general management capacity in most LAs. The study noted that good public sector management training courses were offered by several training providers including tertiary institutions, DPLG through its Municipal Support Programme, SAMDI and the Institute for Local Government Management.
- General administrative and personnel development – institutional development training

- General councillor and community development- problem of different backgrounds and experience;
- Changing development paradigm related training is required to prepare officials for the implementation of community based development, LED and free basic services;
- Changing institutional context- training is required to enable local authorities to understand the policy and legislative environment under which they operate.

The technical training gap

The shortage of technical skills poses a threat to service delivery and proper operation and maintenance of municipal infrastructure. There is also a lack of skills in environmental management which is a new obligation for municipalities. The study identified the following shortcomings in technical training:

- Focus of training on the low level technical training – Most private and public sector training providers are focusing on the low echelons of technical staff such as operators and supervisors and there are limited training offered for the high level technical staff.
- Poor customization of training – training workshops use a one-size-fits-all approach which is not customized to take the local context faced by the municipal councilors and officials especially in rural municipalities that operate under very difficult conditions of poor institutional and environmental capacity.
- A shortage of skilled trainers – There is shortage of skilled trainers that can provide good quality technical training that is appropriate to meet the capacity and skills needs of municipal employees.

3.5 Lessons learned from EU NGO programme of local government capacity support project (Davids, 2002)

The Mvula Trust and other South African NGOs collaborated in Local Government and Capacity Support Projects with EU funding

Based on its experience in training and capacity building for water services provision, the Mvula Trust documented the following lessons and recommendation for developing individual municipal strategies:

- A need to focus on the development of tools for decision-making, problem solving, contracting and monitoring of service providers;
- Training should be evaluated against clear objectives and outcomes rather than the number of training sessions;
- Training courses and methodologies should be approved by a central body such as SALGA or the LGWSETA;
- Councillors must have a working knowledge of the policy and legal framework for water and sanitation service delivery;
- Municipalities should understand the distinction between the Water Services Authority regulatory and planning functions and service provision function;
- Training providers must demonstrate commitment to development approaches.

3.6 Evaluation of the implementation of skills development policies

Brown of McIntosh Xaba and Associates (MXA) in her paper entitled 'Local Government: Moving from training to skills Development,' (undated) evaluated the current skills development policies and practices within municipalities and highlighted the following issues:

Changes in strategic thinking on skills development

In response to the skills development legislation, the metropolitan municipalities have set up Skills Development Units and Skills Development Facilitators are heading these units. The training programmes have been designed to reflect the outcomes based approach and to ensure that all

training staff is accredited as Education, Training and Development Practitioners (ETDPs). The Skills Development Facilitator has to coordinate the development and implementation of the Workplace Skills Plan.

Skills Development has been extended to external people such as Councillors and local unemployed youth and other vulnerable groups so that they can contribute to service delivery.

Changes in the organizational processes regarding skills development

There has been a move from the narrow parameters of training to a holistic approach and this has moved human resource development to the centre of the organizational processes. The legislation requires the establishment of consultative workplace training committees and these are being implemented. These committees have management, council and union representatives that are responsible for overseeing the organizational skills audit process and the preparation of the WSP.

New approaches to the provision of skills development interventions

Metropolitan municipalities are implementing their training in partnership with tertiary institutions which are providing training in management and leadership training programmes for senior managers and councillors. In some cases regional universities are assisting metropolitan municipalities with the design of mentorship programmes and train, advise and support mentors. The universities are developing generic management training courses which are customized to suit the requirements of the municipality.

Three pilot Water learnerships at NQF 2 level, were launched in the Ugu Municipality in KZN; these are Waste Water Process Operations, Water Purification Process Operations and Water Reticulation Services. The LGWSETA has identified the following learnership for future development: Primary Health Care, Environment, Development Planning and Wastewater Care Operator.

Recognition of Prior Learning is being implemented in the following areas: water, sanitation and environment.

Brown's report makes the following recommendation for skills development in municipalities:

- There is a need to link skills development to individual performance needs as well as organizational needs in order to motivate the individuals to learn;
- Staff development targets must be included in the performance contracts of line managers and supervisors; this will give them an incentive to support skills development;
- Training should be customized to suit the local context and challenges, for example, different skills are required by workers in metros compared to the rural municipalities;
- Development of flexible training systems that do not take employees away from their work stations for a long time to avoid negative impacts on service delivery targets;
- Increase use of established educational institutions through the use of partnerships between municipalities and these institutions;
- Provision of training in local languages should be considered for rural municipalities where literacy levels are low.
- Evaluation of the quality and impact of training should be undertaken in order to ensure that the training is making a positive contribution to the quality of service provided by municipalities.

3.7 Capacity and skills required by Water Services Authorities

The Water and Sanitation Sector Report (2002) prepared for the Municipal Demarcation Board identified the functions of WSAs as being the governance and provision of the service. The governance function entails setting the rules of the game, ensuring compliance to those rules and planning efficient, affordable and sustainable services for consumers in their area of jurisdiction.

Governance functions include the following activities:

- Development of water services policies;

- Making by-laws and regulating compliance;
- Setting tariff structures for services;
- Water Services Development Planning;
- Making decisions concerning the most appropriate water services provider (WSP).

The capacity and skills required to fulfil governance include the following:

- Capacity to develop and implement water services policies;
- Planning capacity (Strategic planning) and reporting capacity;
- Financial Management (ensuring effective use of subsidies, as well as cross-subsidisation where necessary);
- Capacity to select the most effective institutional options for the provisions of water services;
- Capacity to manage contracts and associated performance.

The municipality does not require the capacity to provide water services because this function can be contracted to a Water Service Provider. The capacity to implement infrastructure projects is also not necessary because this function can be contracted to Project Implementation Agents. However, the municipality is still accountable for the effective management and reporting on this function.

The provision function includes the following activities:

- Daily operations and delivery of water services;
- Preventative and major maintenance of the water supply and sanitation infrastructure;
- Customer relations and communication;
- Revenue collection and financial management;
- Promotion of sanitation, health and hygiene awareness;
- Provision of information on water service provision.

The following capacity and skills are required to perform the provision function:

- Technical capacity – to operate and maintain water services infrastructure, sewage and wastewater treatment infrastructure, extend or upgrade existing services, manage water losses, control pollution and monitor water quality and quantity of the water sources;
- Customer relations and management capacity;
- Business planning capacity;
- Financial management capacity – revenue collection, meter reading, credit control etc.
- Capacity to implement education and awareness programmes (sanitation, health and hygiene awareness, water conservation and water demand management).

3.8 Constraints to skills development and service delivery in local government sector

A draft position paper prepared by Schoeman et al. (2004) for the Water Services Sector Leadership Group identified the following constraints to skills development for the water services sector:

- *The conflict between rapid implementation of transformation and rapid implementation of service* – Accelerated service delivery requires a stable well-managed environment, on the other hand, transformation leads to a rapid change in skills base at managerial level thus leading to instability.
- *Inadequate systems for collecting data on municipalities*- The existing systems of collecting data on skills in municipalities such as the Workplace Skills Plans and Annual municipality capacity assessment of the Municipal Demarcation Board are not reliable because there is no mechanism to verify the data collected. There is also evidence that municipalities that

are already burdened with too many questionnaires do not respond to the questionnaires for auditing skills shortage

- *Ineffectiveness at various system levels*- Local authorities and Provincial Local Government often bypass the LGWSETA and run their own capacity building programmes. They have gone to local universities to have their programmes accredited.
- *A lack of commitment from supporting institutions*- Inadequate funds allocated to training and there is a lack of political will to develop effective institutional arrangements.
- *Lack of effective communication*- Poor communication between sector departments, within departments and LGWSETA impacts negatively on effective communication of information on available courses and course content.
- *Poor inter-departmental coordination of sector training*- The mechanisms that have been developed to promote interdepartmental coordination of skills development are not effective in ensuring better cooperation among sector departments and LGWSETA.
- *Uncertainty about accessing support resources*- Poor access to information on available resources for supporting WSA capacity building and lack of guidelines for accessing the skills development funds.
- *Uncoordinated approach to the provision of support* – Sector departments are providing support to Local Government in a “silo manner” not in a holistic manner which is necessary to ensure that both individual and institutional capacity issues are addressed. This situation is further exacerbated by donor organizations that implement their own capacity building initiatives without participating in a planned multi-stakeholder approach to support provision.
- *Capacity building is not integrated into IDPs/WSDPs* – IDPs and WSDPs do not address the skills required to implement plans.
- *Insufficient number of accredited training service providers*-There is a shortage of accredited training services providers as well as training courses aimed at developing specific water services related skills within WSAs and WSPs.
- *High staff turnover* – A large number of middle and upper management staff has left the municipalities; consequently, there is an increase in the number of new staff members with limited experience and they struggle to cope with rapidly changing local government environment.

3. 9 A Review of existing reports on Local Government skills audit

A DPLG study undertaken by Kitchin &Ovens (2005) examined available reports on skills and capacity assessment in local government and made recommendations on the usefulness of these documents in addressing skills gap.

The review highlighted the following findings:

Most of the reports reviewed focused on the assessment overall assessment of municipalities with limited emphasis on individual skills of municipal employees. There was emphasis on numbers without linking these to qualifications of individuals and individual jobs. The issue of a match between the qualification of individuals and tasks was not taken into consideration.

A review of the LGWSETA Workplace Skills Plan version 6 (2004) showed that some of the sub-categories that municipalities are expected to complete are not functions of local government. The project team used eThekweni WSP as a case study to assess the effectiveness of the WSP in addressing the skills gaps. From the interviews conducted with senior management of eThekweni Skills Development department, several weaknesses were identified with the WSP such lack of adherence to the WSP ; for example most of the training course conducted by the municipality were not identified in the WSP. The WSP is prepared to comply with LGWSETA and there are no mechanisms in place to monitor the implementation of the WSP or to assess the impact of the training on service delivery.

Kitchin and Ovens (2005) evaluated the Capacity Assessment Tool (CAT) which has been designed to assist with the roll-out of National Capacity Building Strategy within DPLG. The problem of this CAT was that it was web-based and therefore may not be accessible to

municipalities without internet access and computer literacy. The tool relies on the individual's perception rather than used objective assessment of individual skills and abilities.

Kitchin and Ovens (2005) also looked at the approach used by the Municipal Demarcation Board to assess capacity of municipality to perform its required local government functions. They found the use of qualifications and experience of senior management in local government to be problematic because it did not address the competency of the individuals.

Based on their review, Kitchin and Ovens (2005) have made the following recommendations for improving the process of skills assessment:

Skills versus capacity

In line with NCBF, the skills assessment should look at both individual capacity and institutional capacity because highly qualified people cannot deliver in municipalities that lack computers and other office infrastructure.

Need to assess job description/performance contract

There is need to link identification of skills gaps to job descriptions that clearly specifies the skills and competencies required to perform the job.

Effective employment

There is a need to ensure that people are employed in positions where they can best utilize their skills through the use of effective competency profiling and performance management system.

Address skills gaps between officials and councillors

The gap in the qualifications and skills between municipal managers and councillors should be addressed to maximize the joint decision making processes.

Match skills training to skills gaps and incorporate training in performance

Managers and employees must work together to identify appropriate training required and ensure that the training is relevant to the job and after training employees should be given an opportunity to apply their new knowledge to solve job related problems.

Capacity Assessment Tool (CAT)

CAT in its present form does not provide accurate information on individual capacity gaps, it requires major revision so that it can provide objective information on actual skills gaps of individual employees of the municipality.

Development of a framework of non-negotiable base skills

A framework of non-negotiable skills for each category within local government must be developed, this should involve the development of generic job descriptions and these should be linked to specific base competencies for each job. This process should be guided by the legislated roles of municipal officials and councillors.

3.10 Current capacity building initiatives for local government in South Africa

3.9.1 USAID Local Governance Support Program

USAID through its LGSP has assisted 93 municipalities by training more than 5000 ward committee members. It has also supported the establishment of networks for municipalities to share best practice and learn from each other. These activities were supported during Phase 2 of the program which ended in 2004. These are discussed in more detail below.

HOLOGRAM – Horizontal Learning Programme

Hologram aims to build the capacity of local government and to assist individuals within it to cope with the increasing pace of change by facilitating knowledge and learning. Hologram also aims to build and sustain municipalities in the competitive global environment in which municipalities increasingly have to make hard choices. More knowledge equips them better for this task.

Hologram's approach to knowledge sharing and the creation of learning networks encompasses a focus on the "softer" approaches which encourage the development of tacit knowledge. These include coaching and mentoring, developing networks, peer-to-peer exchanges and peer review. The Hologram programme is divided into three main tasks dealing with learning research, learning dissemination and support for municipal learning. These included two rounds of research covering a wide range of topics, the dissemination of a fortnightly e-newsletter to a growing database of municipal practitioners, the maintenance of a content-full website, the production of a range of audio products, the hosting of seminars, and the initiation and support for two learning networks. A mechanism to monitor and evaluate the programme has also been established.

District Learning Network (DLN)

The District Learning Network initiated by Hologram comprised 16 municipalities from 9 provinces. Each municipality makes a voluntary contribution toward the running of the programme and all host events and programmes. The aim of the network is to build the leadership and managerial capability of local government officials and councillors and through activities to enhance skills and competencies. One of the reasons for the success of the Network was the dedicated involvement of several mayors, who champion the Network and have supported it since its inception.

Key lessons learned through the Hologram Programme include:

- Programmes work well if they are demand driven;
- A good and regular supply of content ensures the usefulness of a knowledge sharing mechanism (like a website or e-newsletters);
- Investment should be primarily in content rather than technology;
- Information should be recycled to reach as many audiences as possible;
- Informal as well as formal networking opportunities are important for knowledge sharing;
- Learning from peers is the most important form of learning for mayors, leaders and managers.

Phase 3 support for local governance for three years launched in 2005 is closely aligned to Project Consolidate and it has two specific objectives of improving municipal planning and operating systems and increasing local revenue. 23 municipalities in five provinces will be supported. Councillors and senior officials will be trained in integrated development planning, budgeting and revenue management.

3.9.2 Learning network for District Municipality Water Services Managers

The Water Research Commission cooperated with its research providers in the identification of a need for district water services managers to share their experiences in water service delivery and challenges they face. This led to the launch of the Learning Network for District Municipality Water Services Managers. Through this network the DM water services managers collectively share knowledge and generate solutions to the problems that they face.

3.9.3 Local Government Leadership Academy (LOGOLA)

The Local Government Leadership Academy (LOGOLA) is an individually based leadership development programme that has been conceptualized, formulated and sponsored by the Department of Provincial and Local Government (2004). The objective of LOGOLA is to contribute to the development of a broad base of politically mature leadership that can ensure sustainable developmental government in South Africa. Its purpose is to improve service delivery by enhancing the leadership competencies of local government elected officials and appointed officials. LOGOLA recognizes the importance of combining strong leadership and strong management in a changing local government environment and the importance of soft skills in managing change. The curriculum of LOGOLA will focus on emotional intelligence, effective communication, problem-solving and knowledge management. At the end of training, it is expected that the participants will demonstrate self confidence, vision, creativity, commitment, tolerance, integrity and the ability to maintain relationships at all levels of the social strata.

The competencies to be addressed under the LOGOLA programme are based on interviews with the relevant stakeholders. They are identified competencies in strategic leadership at all levels,

innovation and creativity in dealing with community issues and needs, ability to build trust between the councilors, officials and community and other competing interests. In addition conflict management, ability to commit to achieving objectives and effective communication at all levels will be addressed. The type of leadership training to be provided under this programme will focus on the individual and will assist the individual to achieve personal mastery and help each individual to understand their behaviour and its impact on others.

3.9.4 Department of Provincial and Local Government (DPLG)

Project Consolidate

Project Consolidate is a programme of DPLG that puts emphasis on a hands-on engagement programme of interaction by national and provincial government with local government for the period 2004-2005. It aims to provide support to municipalities as they build capacity to meet their constitutional mandate and it focuses on the municipalities that are struggling to meet the service delivery targets. A high calibre team has been assembled and deployed to work with municipalities to tackle the identified problem areas. This team works closely with the provincial officials so that they can takeover the support of municipalities in their province. Municipalities have an opportunity to learn by doing. Municipalities are supported in building their capacity and developing systems necessary for enabling them to fulfil their constitutional mandate of service delivery to all citizens.

Addressing the shortage of engineering professionals

In response to the report by Lawless, DPLG, SAICE, sector departments and other stakeholders are embarking on the following interventions (Flusk, 2005):

- Establishment of a pool of senior engineers to mentor young engineering graduates who will in turn mentor students requiring experiential training in engineering (DBSA has been approached to fund this initiative);
- Building of a pool of graduates with engineering skills (Umsobomvu has been approached to fund the initiative);
- Development of learnerships for workplace training in partnership with Construction SETA, LGSETA, ECSA and SITA;
- Identification of potential students for B Tech (LGSETA).

The intervention is being piloted in North West where municipalities are struggling to spend their infrastructure budgets.

3.9.5 eThekweni Municipality – Siyaya Learnerships

eThekweni has launched Siyaya learnerships programme for training 1000 unemployed graduates for the job market. The initiative is in line with the city's vision of growing the economy and meeting people's needs so that all citizens will enjoy a high quality of life with equal opportunity in a city they are proud of. The project is a joint venture between eThekweni Municipality and LGSETA. The programme aims to give unemployed graduates a year of practical experience in a variety of fields. It is not employment but it will prepare graduates for entering the job market. The following learnerships that are relevant to the water services sector are part of the programme: audit technician, project management, water reticulation and customer service management.

eThekweni Municipal Skills Development Unit and Durban Institute of Technology are collaborating in the Siyaya Learnerships project. This initiative contributes to the following:

- National Skills Development Strategy;
- Prioritizing critical skills for growth
- Assisting new entrants into the job market and self employment;
- Stimulating quality training for all in the workplace
- Promoting employment and sustainable livelihood through skills development;
- Improving the quality and the relevance of provision.

3.9.6 City of Johannesburg – Skills Development initiatives

The City of Johannesburg has succeeded in creating a learning organization by placing significant value on the education, training and development of its workforce. It has established partnerships with Higher Education institutions and other players that provide customized skills development programmes that are relevant to the strategic objectives of the City of Johannesburg. Skills development is seen as a vehicle for achieving the employment equity targets. Specific efforts are made to ensure that staff members from the designated groups benefit from the skills development initiatives.

The City of Johannesburg conducts an intensive skills audit on an annual basis to identify its strategic and operational skills needs. It has developed a Workplace Skills Plan which is being implemented to address the skills needed. In addition, the City of Johannesburg provides a subsidized education scheme that assists permanent employees to pursue part-time studies towards formal tertiary education qualification.

3.9.7 The Development Bank of Southern Africa (DBSA) – Capacity building initiatives

Vulindlela Academy

The DBSA established Vulindlela Academy to meet the capacity building needs of its internal clients. The focus of this initiative is to strengthen the capacity of local authorities in order to improve their ability to deliver services. The Vulindlela Academy has several skills development programmes such as Young Professionals Programme, Internship programmes and several projects under the Learnership Programme. Some of the graduates from these programmes have found permanent employment in the Bank. The Academy also offers a Women's Development Programme which is focusing on the development of management capacity of women within the Bank. The Academy is fully accredited as a training provider by the LGSETA. The Academy uses local and international expertise to offer its training programmes. It has signed MOUs with the Universities of Witwatersrand, Zululand, Fort Hare, Venda, Limpopo and Stellenbosch.

Local Government Resource Centre and Local Government Network

The Local Government Resource Centre (LGRC) is a DBSA initiative that has been developed in partnership with SALGA, DPLG and other local government stakeholders. Its aim is build the capacity of municipalities so that they can meet the challenges they face in performing their developmental roles and service delivery. LGRC aims to prevent duplication, facilitate knowledge sharing, enhance cooperation and coordination with the local government sector and its partners. DBSA has established the LGRC as a risk mitigation intervention because its main clients are municipalities and therefore it is of paramount importance to ensure that municipalities have the capacity to repay their loans to the bank.

LGRC provides a wide range of services to municipalities and targets senior managers and councilors, approximately 5000 users are linked to LGRC. The following types of services are provided:

- Support materials such as the Municipal professional toolbox which provides how to manuals and guidelines;
- Document Bank – source of information for important documents targeting municipalities from national, provincial and district municipalities, legislation library
- E-government resources – all forms can be downloaded from LGRC
- Municipal problem solver – covers all the KFAs of municipalities
- Chat room – enables direct communication between municipalities and role players;
- Links – to all municipal related websites;
- Muni-expert – a panel of LG specialists has been established, they respond to queries from municipalities within 48 hours;
- Muni-mail – facilitates electronic communication with municipalities

Challenge – computer illiteracy, DBSA provides free accredited training to all the users who are computer illiterate.

Local Government Network (LGnet)

LGnet is a virtual private network that links all local government stakeholders into an e-community. Members of the network include local government institutions, DBSA, National and provincial government departments, SALGA, SA Local government Bargaining Council and LG-related NGOs. LGnet provides a basic ICT service to all spheres of local government and also creates an online platform for collaboration and communication amongst local government stakeholders. To date 177 municipalities have connected to the network. DBSA pays R1 million a month to operate the network.

The network can be used for e-learning and for sharing experience and lesson across municipalities. LGnet provides municipalities with e-mail, internet access, access to LGRC, collaboration with local government stakeholders and web site hosting. DBSA covers all the costs of running the network.

3.9.8 The Northern Cape Operation & Maintenance Project

The Northern Cape Operation & Maintenance is an initiative of the Department of Local Housing and Local Government, Department of Water Affairs & Forestry, SALGA-Northern Cape, Frances Baard District Municipality, DBSA, Swedish Agency for International Development and the Swedish Institute of Public Administration. The overall goal of this project is to strengthen the capacity of municipalities in the province to provide good quality water services through the improvement of operation and maintenance. The Municipal Training & Development Institute of the Northern Cape is responsible for the training administration.

The O& M project is developing handbooks through the action learning approach, i.e. learning by doing. The five handbooks are covering Water, Sanitation, Roads and Stormwater, Legal & Environment and Management. Each municipality is represented by two participants from its technical departments in the teams. The testing and training process consists of five seminars and four periods of field assignments in own municipality. The seminars take 17 days of contact time and are spread over a period of six months. Fieldwork assignments are part of the manager's duties. In addition, participants are required to study the handbook and prepare assignments and special reports. Participants who complete at least 75% of the seminars and assignments are awarded a special MTI Training Certificate; they become trainers and assessors for the implementation of the handbook in other district municipalities in the province.

The manuals to be produced are generic for the Northern Cape conditions, and they target the technical managers and supervisors. The manuals are generic; each municipality is expected to use the generic handbook to develop a plant specific operations and maintenance plans. Trainers will assist the individual municipalities in developing their O&M plans that are specific to their local conditions.

South African Local Government Association (SALGA)

Skills development and capacity building initiative 2006-2011

This initiative targets councilors, Ward committees, traditional leaders, community members with training necessary to build their capacity to deliver services. This initiative is based on the following principles:

Alignment with SAQA and NQF

All training will be linked to unit standards on the NQF in order to ensure that beneficiaries can earn credits towards a recognized qualification that will give them portable skills.

Recognition of local differences

The training courses will be customized to meet the skills required by the different municipalities.

Monitoring and evaluation

On-going M&E will be implemented to assess the impact of capacity building and training on service delivery at local government level and to identify new skills gaps and address them.

Coordination and networking

Coordinating bodies will be established and networking to be used as the key driver for the success of CB programme.

Building sustainability

To ensure sustainability, the skills development and capacity building initiatives must lead to different careers and use should be made of local training institutions such as FET colleges and tertiary institutions.

The National Benchmarking initiative for water services 2005 -2007

The national benchmarking initiative is a joint initiative of SALGA, DWAF and the Water Research Commission; its goal is to promote improved performance of water services by all water services providers in South Africa. Participation in the benchmarking initiative is open to all municipalities that are water services authorities. All participating municipalities must benchmark themselves using compulsory regulatory performance measures that are defined in the National Water Services Regulation Strategy. Annual benchmarking of key performance indicators for the provision of water services is undertaken in participating municipalities. It is anticipated that the benchmarking will help in the identification of best practices from which other municipalities can learn.

3.11 Capacity Building initiatives of other sector departments

3.11.1 Department of Education

The Department of Education has realigned the curriculum reforms and institutional transformation at FET and HE institutions to ensure that learners are equipped with skills needed to become economical active citizens. Through the Annual FET conferences, the Department has brought employers and business closer to education partners to make sure that FET colleges programmes meet the needs of the labour market. The Department is also collaborating with Department of Labour in the implementation of the National Skills Development Strategy; this has led to the growth and uptake of learnerships. The Department is undertaking the following activities to address the skills shortage:

- *Revival of the Human Resource Development Strategy*- The aim of this revival is to improve the integrated human resource development planning and implementation, and monitoring of progress against approved indicators at all levels.
- *Skills development programme reform: SETAs and FET colleges* –The Department is undertaking a massive campaign to reform the education and training programmes of FET colleges so that they match the requirements of SETAs and the labour market. The FET recapitalization programme is attempting to remove all barriers to skills development. HE programmes are being shaped through the funding formula and the human resource development needs of the country and special attention is being given to scarce skills. The Department has identified the teaching of science and technology as high priority areas for improved enrolment. Student funding arrangements are being aligned to address the urgent skills gaps.
- *Improving participation and quality of Mathematics and Science*- A Trust Fund in honour of Mr OR Tambo will be established and supported by interested partners and friends of education, this fund will support the institutions that are producing learners and graduates in mathematics and science under difficult conditions. The fund will provide laboratories and other infrastructure for 102 Dinaledi schools for mathematics and science. The Department has decided to pay maths and science teachers more in order to retain well qualified maths and science teachers in schools. The Department has identified 400 schools for the science and mathematics improvement project to be launched in 2006.

- *Improving use of ICTs in education* – The Department of Education is establishing centres of excellence for technology in education in order to improve the use of ICTs in education; these centres would be located at FET institutions to be selected by the Department in partnership with the Department of Communication. Through the collaboration with the Department of Communication, the tariffs for internet and telephone in schools have been reduced by 50%.
- *Tracking system for outputs and impacts of the education programmes* – The Department has put in place systems and databases for monitoring outputs, outcomes and impacts of its programmes. These systems will provide a cross-linked set of information on different aspects of education institutions.

3.10.2 National Department of Public Works

The Expanded Public Works Programme (EPWP) is short-to-medium term government programme aimed at the provision of job opportunities coupled with training for the unemployed. It covers all spheres of government and state owned enterprises. Provision of learnerships to the beneficiaries is central to the EPWP. This EPWP Contractor Learnership programme is called Vuk'uphile.

Vuk'uphile is a 2-year programme that has been developed to build capacity amongst emerging contractors to execute the increasing amount of labour intensive work that is part of the EPWP. As part of the learnership programme, the learner contractors receive formal training as well as workplace training on the job. The workplace training is provided in the form of ring-fenced contracts issued by an implementing agency at provincial or municipal levels. ABSA assists the learners to get access to finance and build a financial track record. The learners are supported by experienced mentors to build the capacity necessary to tender and execute labour intensive projects when they exit from the learnership programme.

Vuk'uphile programme is managed by the National Department of Public Works, Construction Education and Training Authority (CETA) under the Department of Labour. IDT, Public Bodies and ABSA provide capital finance, access to credit and financial training to nominated learners. The target of the programme is 1500 learners to be trained over the 2 year period.

4. KEY ISSUES EMERGING FROM THE REVIEW

4.1 Enabling policy environment

Policy and legislative environment

From the review of the policy and legislation pertaining to skills development and training; it is clear that the government has put in place a very good enabling policy environment to support skills development and training in the country. The Skills Development Levy Act is an effective instrument for collecting the fund necessary to finance skills development and training in both public and private sector. However, it is unclear how effective is the disbursement of the fund to skills development and training programmes in the water sector.

Skills Development strategies

The Department of Labour has put in place very good National Skills Development Strategies that articulate objectives and outcomes of skills development and training for meeting the services delivery targets. The 2005-2010 National Skills Development Strategy has been allocated a budget of R21.9 billion. Achievement of the objectives of the strategy would depend on a good implementation plan and better mechanisms for optimizing skills development needed to achieve social and economic goals of the country. The limitation of the national skills development strategy is that it lacks an implementation plan and no M&E systems are in place to monitor progress in achieving the skills development targets that are set out.

Promising initiatives

Capacity Building partnerships

There are a few good examples of capacity building partnerships between municipalities and tertiary institutions (eThekweni and City of Johannesburg). DBSA Vulindlela Academy is also building strong partnerships with several universities that offer accredited training to their local

government clients. The National Department of Public Works and the Construction Education and Training Authority (CETA) have been successful in forming partnerships with several institutions that are supporting the skills development for beneficiaries of the Expanded Public Works Programme.

The Municipal Training and Development Institute (MTI) of the Northern Cape is a unique model for building the capacity of municipal officials. In this case, the municipalities in partnership with the sector partners (SALGA and DHLG) have established a provincial training institute for all municipalities in the province. The training is demand driven and the course materials are developed in consultation with the stakeholders. Courses offered are in line with SAQA requirements.

Improvement of the quality of Mathematics and Science in high schools

The Department of Education has established a Trust fund for supporting 102 Dinaledi schools for mathematics and science education. An additional 400 schools have been identified for support under the science and mathematics improvement project to be launched in 2006. The Department has made a commitment to pay science and mathematics teachers more money in order to retain them in the school system. If successful, this initiative will go a long way towards increasing the pool of matric students that meet the entry requirements for science and engineering faculties.

Local Government Resource Centre and Local Government Network

This is a initiative of DBSA that provides municipality with a one-stop shop to all sources of support they need to build capacity to improve their performance. This facility can be used for e-learning so that municipalities can receive training without leaving their offices to attend training courses off-site.

4.2 Short comings

Focus on short term capacity building and training initiatives

The pressure put on municipalities to meet water and sanitation service delivery target has lead to a focus on short term training interventions with limited attention paid to long term capacity building and training needs of the water services sector. Consequently, due to the high turnover of skilled personnel from municipalities; the sector continues to be faced with the shortage of skilled personnel. Not much attention has been paid to ensuring that tertiary institutions are producing graduates with the skills required by local government sector. The critical shortage of scientists and engineering professions is symptom of limited attention paid to long term technical training of engineers and scientists. Unfortunately, the highly technical skills require many years of formal training and cannot be acquired by attending short courses.

Limited use of established tertiary institutions in skills development and training

Although individual municipalities have established partnerships with tertiary institutions, there is no evidence that LGSETA has formal training partnerships with established tertiary institutions. These institutions have an important role to play in meeting the human resource needs of South Africa, especially in science and engineering.

Lack of M&E of the impact of capacity building initiatives

From the review, there is no evidence that LGSETA has systems in place to monitor the impact of the training provided and how this training contributes to the improvement in the performance of municipalities.

4.3 Factors contributing to skills shortage in the water sector

Water Services

The following factors impact negatively on the existing skills levels Water Services Authorities and their ability to deliver water services:

Changes in the local government legislation - The significant changes in the regulatory functioning of municipalities over the last decade have necessitated acquisition of new skills sets by technical

and managerial staff. In addition, the new approach to service delivery that requires extensive stakeholder participation in integrated development planning (e.g. participative planning, rural and peri-urban sanitation and water supply, health and hygiene, etc.) presents a need for the creation of new positions within municipalities.

The Municipal demarcation process (2000) – This process generated massive spatial and organisational restructuring which required geographical integration of financial, administrative, staffing and delivery systems. In addition, service delivery backlogs have had to be consolidated, new areas of delivery have been created and the transfer of assets has taken place. Management of the integrated systems require new skills.

Municipal Workplace Skills Plans - These plans suggest that there have been high levels of skills outflow at NQF Levels 4, 5 and 6. Municipalities are faced with difficulties in skills replacement either through recruitment and/or skills development. On the other hand, there has been a relative increase in the qualifications profile at NQF Levels 1 and 2 with almost 50% of municipal employees being found in the unskilled (43%) and semi-skilled (6%) categories. During the 2002 – 2003 period, only 8% of municipal personnel was made up of technical and professional staff.

Transformation of Human Resource -The transformation required to meet the requirements of the Employment Equity Act has led to a significant decline in the number of the older, more experienced technical and managerial personnel between 1994 and 2000 due to early retirement or resignations. At the same time, in the order of 30% of the personnel outflow during the 2002 to 2003 period was due to death or illness of incumbents. A significant proportion of this was ascribed to the direct and indirect impact of HIV/AIDS.

Changes in the institutional arrangements for the Water Chamber -A number of factors negatively impact on initiatives to promote effective skills development at municipal level. These include the following:

- The LGWSETA which had been the Sector Education and Training Authority tasked with ensuring the adequate development of skills within municipal sector has, itself, been involved in a transformation process. The Water Chamber was transferred to the Energy SETA during 2005. Considerable delays have been experienced in the transformation process with key MoUs for ensuring effective delivery of skills development and coordination between the LGSETA and the ESETA still unsigned. Delays in this regard have hampered both the smooth transition that had been hoped for as well as the increases in performance that had been expected as a result of change in the institutional arrangements for Water Chamber.
- The LGSETA has a limited income stream, this negatively impacts on its ability to fund skills development at a large scale required to address the critical skills shortage experienced by most municipalities. It is still unclear whether any agreement has been reached between the LGSETA and the ESETA about the transfer of funds from the LGSETA to the ESETA in respect of the Water Chamber's skills levy share emanating from the LGSETA levy income.
- The Water Chamber has suffered from a lack of adequate human and financial resources to deliver on its mandate of supporting and coordinating skills development for the water sector. Unfortunately, this situation has not changed under its new management under ESETA.
- *Poor coordination of skills development* –The large number of programmes and entities affiliated with water sector-related institutions creates a risk of *overlapping mandates, duplication and fragmentation of efforts*. Efforts are required to ensure better cooperation and coordination of activities between all role-players. There is a need to identify opportunities for simplifying, streamlining and harmonizing procedures and practices and to ensure that skills development initiatives are designed to form part of appropriate and sustainable institutional development programmes.

5. CONCLUSION AND WAY FORWARD

The review of the current state of capacity building and training in the water sector shows that there is still a lot of work that must be done to put systems in place that are necessary to support the implementation of the skills development strategy for water sector. This mammoth

task requires cooperation and support of all water sector institutions and partners. The Water Chamber alone will not be able to solve the skills shortage problem.

This report serves as a background document for the identification of the skills gaps.

6. BIBLIOGRAPHY

Policy and legislation

National Water Policy 1997, DWAF

White Paper on Public Service Training, 1998, DPSA

White Paper on Local Government, 1998 DPLG

South African Qualification Authority, 1995

Skills Development Act, 1998

Skills Development Levies Act, 1999

Municipal Systems Act, 2000

Strategic documents

National Skills Development Strategy 2001

National Skills Development Strategy 2005-2010

Human Resources Development Strategy for the Public Service 2002-2006

Strategic Framework for Water Services, 2003

National Water Resources Strategy, 2004, DWAF

LGWSETA Sector Skills Plan 2003-2005

National Capacity Building Framework for Local Government

Reports

Brown L undated Local Government: Moving from training to skills development, Hologram Newsletter, <http://www.ksp.org.za>

City of Johannesburg IDP 2004 www.jhb.gov.za

<http://www.dplg.gov.za> Project Consolidate 2004 A hands-on local government programme

Department of Provincial and Local Government 2003 National Capacity Building Framework for Local Government.

Department of Provincial and Local Government 2005 Local Government skills audit: Review of existing data and reports for DPLG prepared by Dr Felicity Kitchin and Wendy Ovens.

Department of Water Affairs & Forestry 2005 Project "Gear-up"- Strategic assessment of sanitation related capacity needs of Water Services Authorities

Department of Water Affairs & Forestry 2004 South Africa's Progress Report on Water and Sanitation presented to the UN Commission for sustainable development Twelfth session, 14-30 April 2004, www.dwaf.gov.za

Development Bank of Southern Africa 2004/2005 Annual Report

eThekweni Municipality Siyaya Learnership <http://www.learnership.durban.gov.za>

Flusk P 2005 The Second Decade of Local Democracy- towards accelerated service delivery (Power Point Presentation), <http://www.dplg.gov.za>

Integrated Consulting Management 2004 Local Government Academy (LOGOLA): The Roadmap for the development of a national cadre of leaders for development local government- A Concept Paper.

Lawless A 2005 Numbers & Needs: Addressing imbalances in the civil engineering profession , A SAICE publication, <http://www.ally.co.za>

Minister of Education, N Pandor 2005 GCIS Parliamentary Media Briefing, <http://www.gov.za>

Municipal Demarcation Board 2002 Water and Sanitation Sector Report

Schoeman G, Perold J, Vermeulen L and Williams S 2004 Strategic options to address constraints and challenges to skills development in the water services sector, Draft Position Paper

Schoeman G, Perold J, Vermeulen L and Williams S 2004 Options for addressing skills development in the Water Services Sector: Realising the Macro Strategy "Promotion of Water Services Delivery through skills development – Report prepared for the Skills Development Sector Committee of the Water Services Leadership Group.

Water Research Commission Knowledge Review Report 2004/2005

10.2 APPENDIX 2: SUMMARY REPORT OF AVAILABLE
SKILLS DEVELOPMENT COURSES

**ASSESSMENT OF TRAINING PROGRAMMES AND CAPACITY
NEEDS FOR THE WATER SECTOR**

**SUMMARY REPORT IN RESPECT OF OUTCOME 2:
Available Skills Development Courses**

Submitted to: The Water Research Commission

Submitted by: Geraldine Schoeman

AFROSEARCH

Development Consultants

P O Box 13540

Hatfield

0028

South Africa

(012) 362 2908

gera@afrosearch.co.za

10.2.1 Courses that address Task Specific Water Related Skills Development

a) Short Courses

| <i>Qualification Type (e.g. Diploma/Degree/Certificate/Short Course)</i> | <i>Where Offered (e.g. University, University of Technology, Private Training Provider, SETA, donor organisations)</i> | <i>Numbers of Graduates (where available)</i> |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| SHORT COURSES | | |
| River Hydraulics, Floods and Stormwater <u>Duration: 4 Days</u> | <u>University of Stellenbosch:</u> Institute for water and environmental engineering, Department of Civil Engineering | |
| Frontiers in managing reform and regulation of the water sector in Africa <u>Duration: 5 Days</u> | <u>University of Cape Town:</u> Graduate School of Business | |
| Membrane Processes (for industrial water treatment and groundwater desalination) | <u>University of Pretoria:</u> Chemical Engineering Department | |
| Water Quality Management and Effluent Treatment | <u>University of Pretoria:</u> Chemical Engineering Department | |
| Water Environmental Management <u>Duration: 5 Days</u> | <u>University of the Free State:</u> Centre for Environmental Management | |
| Introduction to managing environmental water quality <u>Duration: 5 Days</u> | <u>Rhodes University:</u> Institute for Water Research | |
| <u>Course Name:</u> Legal Framework for managing water in South Africa <u>Duration: 5 Days</u> | <u>North West University:</u> Centre for Environmental Management | |
| <u>Course Name:</u> Introduction to Integrated Water Resources Management for Environmental Managers <u>Duration: 4 Days</u> | <u>North West University:</u> Centre for Environmental Management | |
| <u>Course Name:</u> Water Quality Monitoring: Principles, Approaches and Techniques <u>Duration: 4 Days</u> | <u>North West University:</u> Centre for Environmental Management | |
| <u>Course Name:</u> Water Demand and Water Loss Management | Foundation for People-centered Development Water Academy | |
| <u>Course Name:</u> Water Law and institutions | Development Bank Of South Africa (DBSA) Vulindlela Academy | |

Capacity Needs for the Water Services Sector

| <i>Qualification Type (e.g. Diploma/Degree/Certificate/Short Course)</i> | <i>Where Offered (e.g. University, University of Technology, Private Training Provider, SETA, donor organisations)</i> | <i>Numbers of Graduates (where available)</i> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <u>Duration:</u> 5 days | | |
| <u>Course Name:</u> Operation and Maintenance within the water and sanitation sector (in the Northern Cape) <u>Duration:</u> 5 modules spread over 6 months, each lasting between 2-4 days, making up a total of 17 days of seminar training | <ul style="list-style-type: none"> Offered in the Northern Cape by the Municipal Training Institute of the Northern Cape¹⁵. | |

b) Diploma Courses

| DIPLOMA | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------|
| <u>Diploma Name:</u> Postgraduate Diploma in Integrated Water Resources Management (IWRM) <u>Duration:</u> The duration of the programme for full-time students is one year and for part-time students two consecutive years. Save with special permission of Senate, the period of study may not in the case of a full-time student exceed two consecutive years or in the case of a part-time student three consecutive years. | <u>University of the Western Cape:</u> Earth Sciences Department | 1 in 2005 |
| <u>Diploma Name:</u> National Diploma: Water Care <u>NQF Level:</u> 6 <u>Credits:</u> 360 | The following course has been registered with South African Qualifications Authority (SAQA) but is not, as yet being implemented | |

c) Degree Courses (Undergraduate)

| DEGREE COURSES | | |
|-------------------------------------------------------------------------------------------|--------------------------------|------------|
| <u>Degree Name:</u> BSc Hydrology <u>Duration:</u> 3 Years | University of Zululand | 26 in 2005 |
| <u>Degree Name:</u> BSc Water Resources Management <u>Duration:</u> 3 Years | University of Zululand | 8 in 2005 |
| <u>Degree Name:</u> Bachelor of Hydrology and Water Resources <u>Duration:</u> 3 years | University of Venda | |
| <u>Degree Name:</u> BSc Hydrology <u>Duration:</u> 3 years | University of KZN | |
| <u>Degree Name:</u> BSc Environmental and Water Sciences | University of the Western Cape | 7 in 2005 |

¹⁵ Joint initiative between DWAF, SIDA, DBSA and the provincial Department of Housing and Local Government

Capacity Needs for the Water Services Sector

| | | |
|-------------------------------------------------------------------------------------------|-----------------------|--|
| <u>Duration:</u> 3 years | | |
| <u>Degree Name:</u> BSc Community Water Services & Sanitation <u>Duration:</u> 3 years | University of Limpopo | |

d) Degree Courses (Hons)

| | | |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------|
| <u>Degree Name:</u> BSc Hons Hydrology <u>Duration:</u> 1-2 years | University of Zululand | 4 in 2005 |
| <u>Degree Name:</u> BSc Hons Hydrology <u>Duration:</u> 1-2 years | University of KZN | |
| <u>Degree Name:</u> BEng (Hons)(Water Resources Engineering) <u>Duration:</u> 1 year | <u>University of Pretoria</u> Civil Engineering | |
| <u>Degree Name:</u> BSc Honours in Hydrogeology | <u>University of the Western Cape</u> Earth Science Department | |

e) Degree Courses (Masters)

| | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------|
| <u>Degree Name:</u> MSc Hydrology <u>Duration:</u> | University of Zululand | 2 in 2005 |
| <u>Degree Name:</u> MSc in Water Resources Management <u>Duration:</u> 1 year full time, 2 years part-time | University of Pretoria | 3 in 2005 40 in total over the last 5 years |
| <u>Degree Name:</u> Master of Business Administration: Water Management <u>Duration:</u> | University of KZN | |
| <u>Degree Name:</u> Masters in Integrated Water Resources Management (IWRM) <u>Duration:</u> 1 year full time, 2 years part-time | UWC | 3 in 2005 |
| <u>Degree Name:</u> MSc Hydrology | Rhodes University | 4 |
| <u>Degree Name:</u> Course-based MEng and research-based MScEng. Specialist water courses for both, chosen from: River Hydraulics, Applied Hydrology, Water Resource Analysis, water quality management in River Systems, water and wastewater treatment; dam design <u>Duration:</u> 18 months | University of Stellenbosch | MSc = +/- 5 MSc cum laude = 5 MEng = +/- 2 |
| Postgraduate areas of specialization include: <ul style="list-style-type: none"> Water- Quality Engineering – Advanced courses are offered in waste water treatment, Aquatic chemistry and unit processes on water treatment. River engineering and Urban Drainage – Advanced courses are offered in river engineering and urban water management | UCT | |

Capacity Needs for the Water Services Sector

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------|
| <u>Degree Name:</u> MEng Water Utilisation Engineering and MSc Water Utilisation. | <u>University of Pretoria:</u> Chemical Engineering Department | 18 in the last 5 years |
| <u>Degree Name:</u> MEng (Water Resources Engineering | <u>University of Pretoria:</u> Civil Engineering | |
| <u>Degree Name:</u> MSc in the field of Water Recourse engineering | <u>University of KZN</u> Civil Engineering | |
| <u>Degree Name:</u> MSc in the field of Water and Environmental Management: | <u>University of KZN</u> Civil Engineering | |
| Water-Related Post Graduate MSc courses include: <ul style="list-style-type: none"> • <u>Hydraulic and Water Engineering</u> –consists of hydraulic structures, water management, hydrological modeling, water supply and urban drainage. • <u>Environmental Engineering</u> –consists of environmental management, wastewater engineering, pollution control and abatement | <u>University of the Witwatersrand:</u> Civil Engineering | 5 in 2005 4 in 2004 |
| <u>Degree Name:</u> MSc in Hydrogeology | <u>University of the Western Cape</u> Earth Science department | |
| <u>Degree Name:</u> MSc and MPhil in water resource management | <u>University of the Western Cape</u> Earth Science department | |

f) Degree Courses (PhD's)

| PHD COURSES | | |
|----------------------------------------------|-------------------------------------------------------------------|------------------------|
| <u>Degree Name:</u> PhD Hydrology | University of Zululand | 1 in 2005 |
| <u>Degree Name:</u> PhD Hydrology | Rhodes University | 1 |
| <u>Degree Name:</u> PhD Chemical Engineering | <u>University of Pretoria:</u> Chemical Engineering Department | 3 in the last 5 years |
| <u>Degree Name:</u> PhD Civil Engineering | <u>University of the Witwatersrand:</u> Civil Engineering | 2 in 2005 6 in 2004 |
| <u>Degree Name:</u> PhD in Hydrogeology | <u>University of the Western Cape</u> Earth Science department | |

g) Certificate Courses

| CERTIFICATE COURSES | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--|
| <u>Certificate Name:</u> National Certificate Water Care | UNISA | |
| Certificate courses that are offered for water and waste water treatment plant operators, supervisors, managers and maintenance personnel from local government, water boards and industry are: | NCWSTI/ FPCD | |

Capacity Needs for the Water Services Sector

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--|
| <ul style="list-style-type: none"> • Operation of water treatment plants • Management of water treatment plants • Operation of wastewater treatment plants • Management of wastewater treatment plants • Managing water and wastewater treatment plants as an economic unit • Basic office administration applicable to plant operation • Maintenance of water services • Water plant operation and laboratory procedures • Meter readers • Supervisory skills for the maintenance of a community water supply system | | |
| <ul style="list-style-type: none"> • Technical training for the maintenance of community water supply systems • Maintenance of electronic components of water supply systems • Sewer maintenance • Village pump diesel engine operation • Village pump electric engine operation • Advanced certificate in management of water treatment plants | NCWSTI/ FPCD | |
| <u>Name:</u> National Higher Certificate: Water Care <u>NQF Level:</u> 5 <u>Credits:</u> 240 | The following course has been registered with SAQA, but is not, as yet being implemented as Learnerships | |
| <u>Name:</u> National Certificate: Water Care <u>NQF Level:</u> 5 <u>Credits:</u> 120 | The following course has been registered with SAQA, but is not, as yet being implemented as Learnerships | |

h) Further Education and Training Certificates (Learnerships)

| | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|
| Sanitation Project Facilitation (NQF 4) Supervision of Wastewater Reticulation Operations Water Purification Processes NQF Level: 4 Community Water, Health and Sanitation Promotion, NQF Level: 2 Community Water, Sanitation and Health Facilitation, NQF Level: 4 Supervision of Water Reticulation Operations NQF Level: 4 Sanitation Project Co-ordination NQF Level: 5 Wastewater Process Control <u>NQF Level: 4</u> Wastewater Process Operations <u>NQF Level: 2</u> Wastewater Reticulation Services <u>NQF Level: 3</u> Wastewater Reticulation Services <u>NQF Level: 2</u> Water Purification Process Operations <u>NQF Level: 2</u> Water Reticulation Services <u>NQF Level: 2</u> Supervision of Civil Engineering Construction Processes: Water and Waste Water <u>NQF Level: 4</u> Local Economic Development <u>NQF Level: 5</u> Local Economic Development, <u>NQF Level: 6</u> Local Economic Development <u>NQF Level: 4</u> | ESETA Accredited Provider: FPCD and NCWSTI | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|

i) Skills Programmes (Employable Skills Units)

| | | |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--|
| <u>Name:</u> Catchment Mentors for Community-based Integrated Water Resources Management <u>NQF Level:</u> 4 <u>Credits:</u> 90 | Foundation for People Centred Development (FPCD) | |
| <u>Name:</u> Water Services Sector Legislative Framework - a Support and Regulatory Perspective | Foundation for People Centred Development (FPCD) | |
| <u>Name:</u> Water Services Legislation & the role of local government | Mvula Trust/ Foundation for People Centred Development (FPCD) | |

10.2.2 Courses that Address Generic Water-Related Skills Development

a) Generic University Courses: Undergraduate and Post-Graduate

| Universities | Undergraduate Courses | Post-Graduate Courses (Hons/Masters and PhD's) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> University of Zululand (UZ) University of Stellenbosch (US) University of Cape Town (UCT) University of Venda (UV) University of Pretoria (UP) University of KwaZulu-Natal (KZN) University of Limpopo (UL) University of Witwatersrand (UWR) University of the Free State (UFS) University of the Western Cape (UWC) Rhodes University (RU) University of Johannesburg (UJ) Nelson Mandela Metropolitan University (NMMU) University of South Africa (UNISA) North West University (NWU) University of Fort Hare (UFH) | <u>BSc in:</u> <ul style="list-style-type: none"> Hydrosciences (UZ) Environmental Management (UZ, UNISA) Earth and Atmospheric Science (UZ) Agronomy (UZ) Animal Science (UZ) Economics- Agribusiness Management (UZ) Zoology (UZ, US, UCT, UP, KZN, UL, UWR, UFS, UWC, RU, UJ, UNISA, NWU) Microbiology (UZ, US, UCT, KZN, UL, UWR, RU, UNISA, NWU) Biochemistry (UZ, US, UCT, KZN, UL, UWR, RU, UNISA, NWU) Agriculture (US, UV, UP, KZN, UL, UFS) Conservation Ecology (US) Botany (US, UCT, UP, KZN, RU, UJ, NMMU, UNISA, NWU) Geography and Environmental Science (UCT) Chemistry (US, UCT, KZN, UWR, RU) Geology (US, UCT, RU, NMMU, UFH) Oceanography (UCT) Meteorology (UP) Geography (UZ, UV, UP, KZN, UWR, UFS, RU, UJ, NMMU, UNISA, NWU, WSU) Earth Science (UP) Environmental Science (UP) Environmental and Resource Studies (UL) | <u>Post graduate Courses in BSc include:</u> <ul style="list-style-type: none"> Geography (UZ, US, UV, UP, UWC, RU, NMMU, UNISA, WSU) Agriculture (UZ, US, UL, UFH) Biochemistry (UZ, US, KZN, UWR, RU) Microbiology (UZ, US, KZN, UL, UWR, RU, NWU) Geology (US, UCT, RU, NMMU, UFH) Botany (US, UCT, UP, KZN, RU, UJ, NMMU, UFH, WSU) Zoology (US, UCT, UP, KZN, UL, UWR, UFS, UWC, RU, UJ, NWU, UFH, WSU) Conservation Ecology (US) Oceanography (UCT) Geography and Environmental Science (UCT) Ecology and Resource Management (UV) Meteorology (UP) Chemistry (US, KZN, RU) Geography and Environmental Management (KZN, UJ, NWU) Marine Biology (KZN) Geography and Environmental Studies (UWR) Ecology Environment and Conservation (UWR) Geohydrology (UFS, UWC) Environmental Management (UFS, UNISA) Environmental Science (UV, RU) Freshwater Biology (NWU) Ecology (UFH) |
| <ul style="list-style-type: none"> Walter Sisulu University (WSU) | <ul style="list-style-type: none"> Ecology, Environment and Conservation (UWR) Biodiversity and Conservation (UWC) Agricultural Science (UNISA) Geography and Environmental Studies (US) Biological Science (WSU) | <ul style="list-style-type: none"> Climatology (WSU) Environmental Resource Management (WSU) <u>MBA in:</u> <ul style="list-style-type: none"> Environmental Management (RU) <u>MA in:</u> |

Capacity Needs for the Water Services Sector

| <i>Universities</i> | <i>Undergraduate Courses</i> | <i>Post-Graduate Courses (Hons/Masters and PhD's)</i> |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| | <u>Bachelor of:</u> <ul style="list-style-type: none"> Environmental Sciences (UV) Agriculture (UV, KZN, UL, UFS, UFH) Environmental Management (UV) <u>BA in:</u> <ul style="list-style-type: none"> Environmental Management (UNISA) Conservation: Tourism and Sustainable Development. (NWU) <u>Engineering</u> <ul style="list-style-type: none"> BEng Civil (US, UCT, UP, UWR, UJ) BEng Chemical (US, UCT, UP, NWU) BSc Eng Civil (UCT, UP, KZN, UWR) BSc Chemical (UCT, UP, KZN, UWR, NWU) BSc Agricultural/Bioresource Engineering (KZN) | <ul style="list-style-type: none"> Environmental Management (UNISA) |

b) Generic University Courses: Certificates and Diplomas

| <i>Universities</i> | <i>Certificates</i> | <i>Diplomas</i> |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> University of Venda (UV) Nelson Mandela Metropolitan University (NMMU) | <u>Certificate in:</u> <ul style="list-style-type: none"> Environmental Management (UV) Local Government Administration (UNISA) | <u>Diploma in:</u> <ul style="list-style-type: none"> Natural Resource Management (UV) <u>National Diploma in:</u> <ul style="list-style-type: none"> Nature Conservation (NMMU, UNISA)) Civil Engineering (UNISA, WSU) <u>BTech in:</u> <ul style="list-style-type: none"> Nature Conservation (NMMU, UNISA) Civil Engineering (UNISA, WSU) Chemical Engineering (UNISA) <u>MTech in:</u> <ul style="list-style-type: none"> Nature Conservation |

c) Generic University of Technology Courses: Certificates and Diplomas

| <i>University of Technology</i> | <i>Certificates</i> | <i>Diplomas</i> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Tshwane University of Technology (TUT) Cape Peninsula University of Technology (CPUT) Nelson Mandela Metropolitan | <u>National Certificate in:</u> <ul style="list-style-type: none"> Civil Engineering (VUT) <u>National Higher Certificate in:</u> <ul style="list-style-type: none"> Civil Engineering (VUT) | <u>National Diploma in:</u> <ul style="list-style-type: none"> Nature Conservation (TUT, CPUT, MT) Civil Engineering (TUT, CPUT, NMMU, CUT, MT, DIT, VUT) Environmental Science (TUT) |

Capacity Needs for the Water Services Sector

| <i>University of Technology</i> | <i>Certificates</i> | <i>Diplomas</i> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| University (NMMU) <ul style="list-style-type: none"> Central University of Technology (CUT) Mangosutho Technikon (MT) Durban Institute of Technology (DIT) Vaal University of Technology (VUT) | | <ul style="list-style-type: none"> Fire Technology (TUT) Maritime Studies (CPUT) Environmental Health (CPUT, NMMU, CUT) Fisheries Resource Management (CPUT) Oceanography (CPUT) <u>BTech in:</u> <ul style="list-style-type: none"> Nature Conservation (TUT, CPUT, MT) Civil Engineering (TUT, CPUT, NMMU, CUT, DIT, VUT) Environmental Science (TUT) Environmental Management (TUT, CPUT) Environmental Health (CPUT, NMMU, CUT) Oceanography (CPUT) <u>MTech in:</u> <ul style="list-style-type: none"> Environmental Science (TUT) Environmental Management (TUT) Environmental Health (CPUT, CUT) Nature Conservation (CPUT) <u>DTech in:</u> <ul style="list-style-type: none"> Environmental Science (TUT) Environmental Management (TUT) Environmental Health (CPUT, CUT) |
| d) Generic Courses provided by SETA's, Private Training Providers, Government Departments and Donor Organisation | | |
| <i>SETA's/ Donor Organisations/Private Training Providers/Government Departments</i> | <i>Certificates</i> | <i>Short Courses</i> |
| LGSETA | <u>National Certificate in</u> <ul style="list-style-type: none"> Municipal Finance and administration <u>Certificate:</u> <ul style="list-style-type: none"> Local Government NQF 5, 120 credits Municipal Financial Management, NQF 6, 166 credits <u>Higher Certificate:</u> <ul style="list-style-type: none"> Local Government, NQF 5, 240 Credits | |

Capacity Needs for the Water Services Sector

| <i>SETA's/ Donor Organisations/Private Training Providers/Government Departments</i> | <i>Certificates</i> | <i>Short Courses</i> |
|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ESETA | <u>National Certificate:</u> <ul style="list-style-type: none"> Hydro Power Plant Operation, NQF 4, 150 Credits | |
| Tourism, Hospitality and Sport Education and Training Authority (THETA) | <u>National Certificate:</u> <ul style="list-style-type: none"> Community Conservation: Practice and Co-ordination, NQF 5, 130 Credits <u>General Education and Training Certificate:</u> <ul style="list-style-type: none"> Conservation, NQF 1, 130 Credits | |
| DBSA Vulindlela Academy in partnership with the University of Witwatersrand | | <u>Name:</u> Integrated Development Planning <u>Duration:</u> 2 day <u>Dates:</u> 6-7 February 2006 |
| DBSA Vulindlela Academy | | <u>Name:</u> Development Facilitation <u>Duration:</u> 5 days <u>Dates:</u> August 2006 (the specific dates will be determined in consultation with the delegates) October 2006 (the specific dates will be determined in consultation with the delegates) |
| DBSA Vulindlela Academy | | <u>Name:</u> Municipal infrastructure Investment modelling, IDP budget project prioritization |
| Amanzi through the partner organisations InWEnt and Constraint Management Training (CMT). | | <u>Course Name:</u> Constraint Management Course |
| Department of Provincial and Local Government (DPLG) | | <u>Capacity building initiatives in municipalities:</u> <ul style="list-style-type: none"> Training on Municipal Infrastructure Grant (MIG) and Municipal Infrastructure System (MIS) Training on annual financial statements Training on Municipal Service Partnership <u>Capacity building initiatives in MIG 05/06:</u> <ul style="list-style-type: none"> Training for new receiving – medium to low capacity. |

Capacity Needs for the Water Services Sector

| <i>SETA's/ Donor Organisations/Private Training Providers/Government Departments</i> | <i>Certificates</i> | <i>Short Courses</i> |
|--------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <ul style="list-style-type: none"> • Training on the MIG policy framework, to facilitate the reviewing of the MIG policy framework. • Training on MIG and electricity • Asset management training |
| USAID | | In January 2004 USAID began funding an NGO-led programme in 14 local municipalities that targets the leaders of community-based NGOs. The leaders are trained in how their local council works, on the avenues provided for participation in their local council's budgeting, planning and procurement processes. |
| Ford Foundation | | <u>Recent grants for training include:</u> <ul style="list-style-type: none"> • Centre for Applied Social Sciences, University of Zimbabwe and Programme for Land and Agrarian Studies, University of the Western Cape- For research, training and analysis of regional issues related to community-based natural resource management. • Group for Environmental Monitoring-To develop natural resource management, promote policy dialogue and support organizational capacity-building in South Africa. • Southern Africa Regional Institute for Policy Studies- For research, policy analysis and postgraduate training in environmental security in Southern Africa. |

10.2.3 Summary of Identified Skills Gaps

The following Section sets out a summary of the findings related to specific skills gaps within WSA and WSP context as identified through the project entitled "Constraints and Challenges to Skills Development in the Water Services Sector (Schoeman et al., 2005). The skills gaps listed were identified through a process of focus group meetings within municipalities as well as a number of regional and national workshops.

| SKILLS GAP | TARGET GROUP | | | | | | |
|--------------------------------------------|---------------------------|---------------------------------|-----------------|-----------------|--------------|----------|-----------------------------|
| | Leadership and governance | Management and senior officials | Technical staff | Financial Staff | HR and Admin | Services | Crafts & Elementary workers |
| FOUNDATIONAL SKILLS | | | | | | | |
| Listening skills | ✓ | ✓ | | | ✓ | | |
| Teamwork | ✓ | | | | ✓ | | ✓ |
| Acceptance of diversity | ✓ | ✓ | | | ✓ | ✓ | ✓ |
| Time Management | ✓ | | | | | ✓ | |
| Telephone Skills | | | | | | ✓ | |
| Basic literacy | | | | | | ✓ | ✓ |
| Numeracy | | | | | | ✓ | ✓ |
| Formal writing skills | ✓ | ✓ | | | | | |
| Knowing how to learn | | | | | | | ✓ |
| GENERIC SKILLS | | | | | | | |
| People management/people skills | ✓ | ✓ | | | ✓ | | |
| Project management | | ✓ | ✓ | | | | |
| Financial skills | ✓ | ✓ | | ✓ | | | |
| General technical skills | | | ✓ | | | | ✓ |
| Health and safety skills | | | ✓ | | | | ✓ |
| Operation and maintenance of equipment | | | ✓ | | | | ✓ |
| Conflict Management | ✓ | ✓ | | | ✓ | | |
| Reporting/report writing | ✓ | ✓ | | | | | |
| HR Management | | | | | ✓ | | |
| Communication and PR | ✓ | ✓ | | | ✓ | | |
| Customer relations/customer services | | | | | | | |
| Information and Computer technology skills | ✓ | | | ✓ | ✓ | | |
| Knowledge of own role/organisation's role | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Legal and contractual knowledge | | ✓ | | | ✓ | | |
| Diversity management | | ✓ | | | ✓ | | |

Capacity Needs for the Water Services Sector

| SKILLS GAP | TARGET GROUP | | | | | | |
|------------------------------------------------------------------------|---------------------------|---------------------------------|-----------------|-----------------|--------------|----------|-----------------------------|
| | Leadership and governance | Management and senior officials | Technical staff | Financial Staff | HR and Admin | Services | Crafts & Elementary workers |
| Change Management | | ✓ | | | ✓ | | |
| Problem solving | ✓ | | | | | | |
| Strategic and business management/planning | ✓ | ✓ | | | | | |
| Monitoring and evaluation | | ✓ | ✓ | | ✓ | | |
| General research skills | | | ✓ | | | | |
| Maintenance management | | | ✓ | | | | |
| Capacity building and educational skills | | | | | ✓ | | |
| Facilitating public/community participation | ✓ | | | | ✓ | | |
| Knowledge of governmental institutional arrangements | ✓ | ✓ | | | ✓ | | |
| Knowledge of local government | ✓ | ✓ | | | | | |
| Office administration | | | | ✓ | ✓ | ✓ | |
| TASK-SPECIFIC SKILLS FOR WSA FUNCTIONS | | | | | | | |
| Bylaws for water services and credit control | ✓ | ✓ | | | | | |
| Free basic sanitation policy | ✓ | ✓ | | | | | |
| Infrastructure development | | ✓ | ✓ | | | | |
| Water Services Provider contractual arrangements | ✓ | ✓ | | | | | |
| Performance management and regulation | | ✓ | | | ✓ | | |
| Risk and disaster management | | ✓ | ✓ | | | | |
| Reporting and accountability | ✓ | ✓ | | | ✓ | | |
| Knowledge of water-related legislation | ✓ | ✓ | ✓ | ✓ | | | |
| Compilation of Water Services Development Plans (WSDP) | ✓ | ✓ | | | | | |
| Development of a system for WSDP reporting and water services auditing | | ✓ | ✓ | ✓ | | | |
| Linking WSDPs, IDPs and WR planning | ✓ | ✓ | ✓ | | | | |
| Water Conservation and Demand Management | | ✓ | ✓ | | | | |
| TASK-SPECIFIC SKILLS FOR WSP FUNCTIONS | | | | | | | |

| SKILLS GAP | TARGET GROUP | | | | | | |
|------------------------------------------------------------------|---------------------------|---------------------------------|-----------------|-----------------|--------------|----------|-----------------------------|
| | Leadership and governance | Management and senior officials | Technical staff | Financial Staff | HR and Admin | Services | Crafts & Elementary workers |
| Setting conditions for provision of water services | | ✓ | | | | | |
| Financial Management | | ✓ | | | | | |
| Contract management | | ✓ | | | | | |
| Customer relations and communication | | | | | | ✓ | |
| TASK-SPECIFIC SKILLS FOR ADDRESSING CROSS-CUTTING PRIORITIES | | | | | | | |
| Skills to implement Local Economic Development (LED) initiatives | ✓ | ✓ | ✓ | ✓ | | | |
| Stakeholder participation skills | ✓ | ✓ | ✓ | | ✓ | | |
| Mainstreaming a Gender Perspective | ✓ | ✓ | ✓ | | ✓ | ✓ | |
| Co-operative Governance skills | ✓ | ✓ | ✓ | | | | |
| Batho Pele Principles of Public Service Delivery | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Holistic understanding of WSA and WSP functions | ✓ | ✓ | ✓ | ✓ | ✓ | | |

10.2.4 References in Literature to Availability of Skills

The following deficits in respect of Foundational skills were identified, based on a study of available literature setting out the availability or absence of skills within the sector:

a) Adult Basic Education and Training (ABET)

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | In a survey of municipal managers and workers, 4% of managers and 9% of workers rated ABET as the most important generic skill need. This suggests relatively low availability of this skill. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Amongst generic skills needs, ABET was ranked third, suggesting relatively low availability of such skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in ABET skills was identified. | 1 (very low) |
| Department of Labour, 2001, p. 41 | The Public Service Review Report of 1999 identified a general lack of adult basic education and training for low-level workers in the public service. | 1 (very low) |

b) Life skills

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst specific skills needs, life skills were ranked fourth, suggesting relatively low availability of such skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A fairly significant shortage in research skills was identified. | 2 (relatively low) |

c) Team work

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | In a survey of municipal managers and workers, 13% of managers and 8% of workers rated teamwork as the most important generic skill need. This suggests relatively low availability of this skill. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Amongst generic skills needs, teamwork was ranked first, suggesting very low availability of such skills. | 1 (very low) |
| Department of Labour, 2001, p. 41 | The Public Service Review Report of 1999 identified a general lack of team building skills in the public service. | 1 (very low) |

d) Acceptance of diversity

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 32 | A number of respondents pointed to racial tensions in their organisations. This is likely to be an important theme across the sector and imparting diversity and change management skills to management, is one way of addressing this problem | 1 (very low) |

The following generic skills deficits in respect of general management functioning were identified:

e) Diversity management

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 100 (Senior Officials and Managers) was rated third, suggesting very low availability of generic skills related to management. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 38 | The sector suffers from high turnover of skilled staff (which is especially evident in large municipalities). This is indicative of poor organisational management and people practices. This suggests very low availability of generic skills related to people management. | 1 (very low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in people management and general management skills was identified. | 1 (very low) |
| Department of Labour, 2001, p. 41 | The Public Service Review Report of 1999 identified a general lack of diversity management skills in the public service. | 1 (very low) |

f) Change management

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 100 (Senior Officials and Managers) was rated third, suggesting very low availability of generic skills related to management. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 38 | The sector suffers from high turnover of skilled staff (which is especially evident in large municipalities). This is indicative of poor organisational management and people practices. This suggests very low availability of generic skills related to people management. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in people management and general management skills was identified. | 1 (very low) |
| Department of Labour, 2001, p. 40 | The Public Service Review Report of 1999 identified a general lack of transformation management skills in the public service. | 1 (very low) |

g) Maintenance management

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 100 (Senior Officials and Managers) was rated third, suggesting very low availability of generic skills related to management. | 1 (very low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in maintenance management skills was identified. | 1 (very low) |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|

The following generic skills gaps related to HR Management functioning were identified:

h) Planning

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 100 (Senior Officials and Managers) was rated third, suggesting very low availability of generic skills related to management. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 45 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in planning skills was identified. | 1 (very low) |
| Potter, 2002 p. 7 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant shortage in water services development planning skills was identified amongst officials. | 1 (very low) |

i) Problem solving

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | In a survey of workers and municipal managers, only about 10% of respondents rated problem solving as the most important generic skill need. This suggests relatively low availability of this skill. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst generic skills needs, analytical skills were ranked fifth, suggesting relatively low availability of problem solving skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 45 | The top 5 specific, generic and technical skills needs among environment, health and welfare staff were identified by integrating quantitative and qualitative data. Analytical skills emerged amongst the top five generic skills needs, suggesting relatively low availability of such skills. | 2 (relatively low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A fairly significant shortage in problem solving skills was identified. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in problem solving skills was identified. | 1 (very low) |

j) *People management / people skills*

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 100 (Senior Officials and Managers) was rated third, suggesting very low availability of generic skills related to management. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 38 | The sector suffers from high turnover of skilled staff (which is especially evident in large municipalities). This is indicative of poor organisational management and people practices. This suggests very low availability of generic skills related to people management. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 42 | In a survey of workers in the LGW sector, 24% of respondents rated managers' people management skills as low, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A fairly significant shortage in people management skills was identified. | 2 (relatively low) |
| Department of Labour, 2001, p. 40 | The Public Service Review Report of 1999 identified a general lack of people management skills in the public service. | 1 (very low) |

k) *HR management*

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 38 | The sector suffers from high turnover of skilled staff (which is especially evident in large municipalities). This is indicative of poor organisational management and people practices. This suggests very low availability of generic skills related to people management. | 1 |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| | | (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and HR managers, HR officers were identified as one of the job titles suffering from specific skills shortages. This suggests relatively low availability of generic skills related to this job title. A general shortage of suitably qualified black job candidates was also identified. | 2 (relatively low) |
| Potter, 2002 p. 8 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant shortage in human resources management skills was identified amongst WSPs. | 1 (very low) |
| Department of Labour, 2001, p. 40 | The Public Service Review Report of 1999 identified a general lack of HR management skills in the public service. | 1 (very low) |

l) Capacity building skills

No direct evidence regarding the availability of this generic skill could be obtained from the available literature.

The following generic business management skills deficits were identified:

m) Strategic & business management / planning

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 100 (Senior Officials and Managers) was rated third, suggesting very low availability of generic skills related to management. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and HR managers, chairpersons of Audit Committees were identified as one of the job titles suffering from specific skills shortages. This suggests very low availability of generic skills related to this job title. A general shortage of suitably qualified black job candidates was also identified. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and managers, general managers were identified as one of the job titles suffering from specific skills shortages. This suggests relatively low availability of generic skills related to this job title. | 2 (relatively low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst specific skills needs, management skills were ranked first, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in people management skills was identified. | 1 (very low) |
| Potter, 2002, p. 7 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant shortage in business planning skills was identified amongst officials. | 1 (very low) |
| (DWAF, 2001) | In the electronic document, <i>Managing the Water Quality Effects of Settlements: A Summary of the Experiences in the Test Cases</i> , a lack of strategic planning skills is identified in the water services sector. | 1 (very low) |
| Department of Labour, 2001, p. 41 | The Public Service Review Report of 1999 identified a general lack of strategic planning skills in the public service. | 1 (very low) |

n) Project financing and writing of business plans

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and managers, project managers were identified as one of the job titles suffering from specific skills shortages. This suggests relatively low availability of generic skills related to this job title. A general shortage of suitably qualified black job candidates was also identified. | 2 (relatively low) |

o) Project management

| Reference | Description | Skill Availability Rating |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003- | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and | 1 |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 2005, p. 37 | skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and managers, project managers were identified as one of the job titles suffering from specific skills shortages. This suggests relatively low availability of generic skills related to this job title. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. Some shortage in project management skills was identified. | 2 (relatively low) |
| Potter, 2002, p. 8 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant shortage in project management skills was identified amongst WSPs. | 1 (very low) |
| Atkinson, 2002, p. 6 | In an Occasional Paper by the Integrated Rural and Regional Development Research Programme, a "glaring lack" of project planning and management skills is identified amongst WSAs. | 1 (very low) |
| DWAF, 2001 | In the electronic document, <i>Managing the Water Quality Effects of Settlements: A Summary of the Experiences in the Test Cases</i> , a lack of project management skills is identified in the water services sector. | 1 (very low) |
| Department of Labour, 2001, p. 40 | The Public Service Review Report of 1999 identified a general lack of project management skills in the public service. | 1 (very low) |

p) Project planning

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and managers, project managers were identified as one of the job titles suffering from specific skills shortages. This suggests relatively low availability of generic skills related to this job title. | 2 (relatively low) |
| Atkinson, 2002, p. 6 | In an Occasional Paper by the Integrated Rural and Regional Development Research Programme, a "glaring lack" of project planning and | 1 |

| | | |
|--|-----------------------------------------------|------------|
| | management skills is identified amongst WSAs. | (very low) |
|--|-----------------------------------------------|------------|

q) Linking Water Services Development Plans (WSDPs) & Integrated Development Plans

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 100 (Senior Officials and Managers) was rated third, suggesting very low availability of generic skills related to management. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in integrated development planning skills was identified. | 1 (very low) |
| Potter, 2002, p. 7 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant lack of understanding of IDPs was identified amongst officials. | 1 (very low) |

r) Linking WSDPs and water resource planning

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 100 (Senior Officials and Managers) was rated third, suggesting very low availability of generic skills related to management. | 1 (very low) |
| Potter, 2002, p. 7 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant lack of understanding of WSDPs was identified amongst officials. | 1 (very low) |

s) Monitoring and evaluation

| Reference | Description | Skill Availability Rating |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003- | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and | 1 |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 2005, p. 37 | skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in monitoring and evaluation skills was identified. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 48 | An assessment of the skill requirements for alternative service delivery mechanisms – including public-private partnerships (PPPs) and “municipal community partnerships” (MCP’s) – revealed very significant shortage of monitoring & evaluation skills. | 1 (very low) |
| Potter, 2002, p. 8 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant shortage in project monitoring skills was identified amongst WSPs. | 1 (very low) |
| Department of Labour, 2001, p. 40 | The Public Service Review Report of 1999 identified a general lack of monitoring and evaluation skills in the public service. | 1 (very low) |

t) Monitoring through an input-output-outcome-impact model

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO’s, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO’s and HR managers, LED specialists were identified as one of the job titles suffering from specific skills shortages. This suggests very low availability of generic skills related to this job title. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in monitoring and evaluation skills was identified. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 48 | An assessment of the skill requirements for alternative service delivery mechanisms – including public-private partnerships (PPPs) and “municipal community partnerships” (MCP’s) – revealed very significant shortage of monitoring and evaluation skills. | 1 (very low) |

u) Auditing and review

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and HR managers, chairpersons of Audit Committees were identified as one of the job titles suffering from specific skills shortages. This suggests very low availability of generic skills related to this job title. The survey also identified the attraction and retention of <i>suitably qualified historically disadvantaged South Africans</i> in high-end occupations as a major challenge in the sector. | 1 (very low) |

v) Budgeting

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst specific skills needs, financial management was ranked third, suggesting very low availability of related skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, finance and HR staff were identified by integrating quantitative and qualitative data. Amongst specific skills needs, financial management was ranked fourth, suggesting relatively low availability of related skills. | 2 (relatively low) |
| (DWAF, 2001) | In the electronic document, <i>Managing the Water Quality Effects of Settlements: A Summary of the Experiences in the Test Cases</i> , a lack of budgeting skills is identified in the water services sector. | 1 (very low) |

w) Financial management, statements and reporting

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst specific skills needs, financial management was ranked third, suggesting very low availability of related skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, finance and HR staff were identified by integrating quantitative and qualitative data. Amongst specific skills needs, financial management was ranked fourth, suggesting relatively low availability of related skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in financial skills was identified. | 1 (very low) |
| Department of Labour, 2001, p. 40 | The Public Service Review Report of 1999 identified a general lack of financial management skills in the public service. | 1 (very low) |

x) Financial planning

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst specific skills needs, financial management was ranked third, suggesting very low availability of related skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003- | The top 5 specific, generic and technical skills needs among admin, finance and HR staff were identified by integrating quantitative and qualitative data. Amongst specific skills needs, financial management was ranked fourth, suggesting relatively low availability of related | 2 |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 2005, p. 44 | skills. | (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in financial skills was identified. | 1 (very low) |
| Potter, 2002, p. 8 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant shortage in financial planning skills was identified amongst WSPs. | 1 (very low) |
| (DWAF, 2001) | In the electronic document, <i>Managing the Water Quality Effects of Settlements: A Summary of the Experiences in the Test Cases</i> , a lack of financial planning skills is identified in the water services sector. | 1 (very low) |

y) Funding

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |

z) Debt collection

| Reference | Description | Skill Availability Rating |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Potter, 2002, p. 8 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant shortage in skills related to cost recovery was identified amongst WSPs. | 1 (very low) |

aa) Communication and PR

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | In a survey of municipal managers, 16% of respondents rated communication as the most important generic skill need. This suggests relatively low availability of this skill. | 2 (relatively low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst specific skills needs, communication was ranked second, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Amongst specific skills needs, communication was ranked third, suggesting relatively low availability of such skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A fairly significant shortage in communication skills was identified. | 2 (relatively low) |
| Department of Labour, 2001, p. 41 | The Public Service Review Report of 1999 identified a general lack of communication skills in the public service. | 1 (very low) |

bb) Facilitating public / community participation

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst technical skills needs, community facilitation was ranked first, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in community awareness skills was identified. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A fairly significant shortage in community awareness skills was identified. | 2 (relatively low) |

cc) Engaging civil society organisations in creating a link between government and local communities

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst technical skills needs, community facilitation was ranked first, suggesting very low availability of such skills. | 1 (very low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in community awareness skills was identified. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A fairly significant shortage in community awareness was identified. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 48 | An assessment of the skill requirements for alternative service delivery mechanisms – including public-private partnerships (PPPs) and “municipal community partnerships” (MCP’s) – revealed very significant shortage in skills related to public participation. | 1 (very low) |

dd) Investigating & addressing constraints to participation

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative & qualitative data. Amongst technical skills needs, community facilitation was ranked first, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 48 | An assessment of the skill requirements for alternative service delivery mechanisms – including public-private partnerships (PPPs) and “municipal community partnerships” (MCP’s) – revealed very significant shortage in skills related to public participation. | 1 (very low) |

ee) Conflict management

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Conflict resolution was rated amongst the most important technical skills needs, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. Some shortage in conflict resolution skills was identified. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 48 | An assessment of the skill requirements for alternative service delivery mechanisms – including public-private partnerships (PPPs) and “municipal community partnerships” (MCP’s) – revealed very significant shortage in skills related to public participation. | 1 (very low) |

Capacity Needs for the Water Services Sector

| | | |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Potter, 2002, p. 7 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant lack of conflict resolution skills was identified amongst officials. | 1 (very low) |
| Department of Labour, 2001, p. 41 | The Public Service Review Report of 1999 identified a general lack of conflict management skills in the public service. | 1 (very low) |

ff) Negotiating

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst technical skills needs, community facilitation was ranked first, suggesting very low availability of related skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in negotiation skills was identified. | 1 (very low) |

gg) Customer relations / service

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOCs 400 (Clerks) was rated fourth, suggesting relatively low availability of clerical skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | In a survey of municipal managers and workers, 4% of managers and 12% of workers rated customer service as the most important generic skill need. This suggests relatively low availability of this skill. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst generic skills needs, customer service was ranked first, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Amongst generic skills needs, customer service was ranked second, suggesting very low availability of such skills. | 1 (very low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A significant shortage in customer relations skills was identified. | 1 (very low) |
| Potter, 2002, p. 7 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant lack of customer relations skills was identified amongst officials. | 1 (very low) |

hh) General technical skills including energy-, flow & pressure management

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 300 (Technicians and Associated Professionals) was rated second, suggesting very low availability of generic technical skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and managers, engineers, laboratory and other technicians and plant operators were identified as job titles suffering from specific skills shortages. This suggests very low availability of relevant technical skills. A general shortage of <i>black artisans</i> was also reported. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 45 | The top 5 specific, generic and technical skills needs among environment, health and welfare staff were identified by integrating quantitative and qualitative data. Several technical skills were identified in which there are significant skills needs. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in technical skills was identified. | 1 (very low) |
| (DWAF, 2001) | In the electronic document, <i>Managing the Water Quality Effects of Settlements: A Summary of the Experiences in the Test Cases</i> , a general lack of technical skills is identified in the water services sector. | 1 (very low) |

ii) Health and safety skills

| Reference | Description | Skill Availability Rating |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003- | The top 5 specific, generic and technical skills needs among community service staff were identified by integrating quantitative and | 2 |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 2005, p. 45 | qualitative data. Health and safety were ranked amongst the top technical skills needs, suggesting relatively low availability of such skills. | (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. Some shortage in safety skills was identified. | 2 (relatively low) |

jj) Operation & maintenance of equipment

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 300 (Technicians and Associated Professionals) was rated second, suggesting very low availability of generic technical skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in operation and maintenance skills was identified. | 1 (very low) |

kk) Risk management

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 300 (Technicians and Associated Professionals) was rated second, suggesting very low availability of generic technical skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. Some shortage in safety skills was identified. | 2 (relatively low) |

ll) Water conservation skills

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 300 (Technicians and Associated Professionals) was rated second, suggesting very low | 1 (very low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| | availability of generic technical skills. | |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. Some shortage in water conservation skills was identified. | 2 (relatively low) |

mm) Water quality management

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 300 (Technicians and Associated Professionals) was rated second, suggesting very low availability of generic technical skills. | 1 (very low) |
| Potter, 2002, p. 7 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant lack of water quality management skills was identified in WSAs. | 1 (very low) |

nn) Office management and filing

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOCs 400 (Clerks) was rated fourth, suggesting relatively low availability of clerical skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and managers, general clerks were identified as job titles suffering from specific skills shortages. This suggests relatively low availability of office administration skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 45 | The top 5 specific, generic and technical skills needs among environment, health and welfare staff were identified by integrating quantitative and qualitative data. A fairly significant shortage in administrative skills was identified. | 2 (relatively low) |

oo) Information and Computer Technology (ICT) skills

| Reference | Description | Skill Availability Rating |
|-----------|-------------|---------------------------|
|-----------|-------------|---------------------------|

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and HR managers, IT professionals were identified as one of the job titles suffering from specific skills shortages. This suggests very low availability of generic skills related to this job title. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | In a survey of municipal managers and workers, 20% of respondents rated information and computer technology as the most important generic skill need. This suggests very low availability of this skill. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst generic skills needs, information and computer technology was ranked fourth, suggesting relatively low availability of such skills. | 2 (relatively low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Amongst specific skills needs, information and computer technology was ranked second, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 45 | The top 5 specific, generic and technical skills needs among environment, health and welfare staff were identified by integrating quantitative and qualitative data. A very significant shortage in information and computer technology skills was identified. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in information and computer technology skills was identified. | 1 (very low) |

pp) Data capture

No direct evidence regarding the availability of this generic skill could be obtained from the available literature.

qq) Information management

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 45 | The top 5 specific, generic and technical skills needs among environment, health and welfare staff were identified by integrating quantitative and qualitative data. A very significant shortage in information and computer technology skills was identified. | 1 (very low) |
| Potter, 2002, p. 7 | At a DWAF Training and Capacity Building Co-ordination Workshop, a significant lack of understanding of information management skills was identified amongst officials and in WSAs. | 1 (very low) |

Capacity Needs for the Water Services Sector

| | | |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------|
| Department of Labour, 2001, p. 41 | The Public Service Review Report of 1999 identified a general lack of information management skills in the public service. | 1 (very low) |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------|

rr) Reporting / Report writing

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | In a survey of municipal managers and workers, 18% of managers and 12% of workers rated report writing as the most important generic skill need. This suggests very low availability of this skill. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst generic skills needs, report writing was ranked third, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in report writing skills was identified. | 1 (very low) |

ss) Public administration

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Public administration was rated amongst the most important technical skills needs. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. Some shortage in public administration skills was identified. | 2 (relatively low) |

tt) Legal and contractual knowledge

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 45 | The top 5 specific, generic and technical skills needs among community service staff were identified by integrating quantitative and qualitative data. Legal knowledge was rated amongst the most important technical skills needs, suggesting very low availability of such | 1 |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| | skills. | (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 48 | An assessment of the skill requirements for alternative service delivery mechanisms – including public-private partnerships (PPPs) and "municipal community partnerships" (MCP's) – revealed very significant shortage in skills related to legal issues. | 1 (very low) |

uu) Knowledge of governmental institutional arrangements

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Legislative and contextual knowledge was rated amongst the most important technical skills needs, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Legislative and contextual knowledge was rated amongst the most important technical skills needs, suggesting very low availability of such skills. | 1 (very low) |

vv) Knowledge of local government

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Legislative and contextual knowledge was rated amongst the most important technical skills needs. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Legislative and contextual knowledge was rated amongst the most important technical skills needs, suggesting very low availability of such skills. | 1 (very low) |

ww) Knowledge of the Batho Pele Principles of customer service delivery

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Amongst generic skills needs, customer service was ranked first, suggesting very low availability of such skills. | 1 (very low) |

xx) Understanding principles of co-operative governance

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 43 | The top 5 specific, generic and technical skills needs among councillors were identified by integrating quantitative and qualitative data. Legislative and contextual knowledge was rated amongst the most important technical skills needs, suggesting very low availability of such skills. | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 44 | The top 5 specific, generic and technical skills needs among admin, financial and HR staff were identified by integrating quantitative and qualitative data. Legislative and contextual knowledge was rated amongst the most important technical skills needs, suggesting very low availability of such skills. | 1 (very low) |

yy) Understanding principles of LED

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 40 | In a survey of CEO's and HR managers, LED specialists were identified as one of the job titles suffering from specific skills shortages. This suggests very low availability of generic skills related to this job title. The survey also identified the attraction and retention of <i>suitably qualified historically disadvantaged South Africans</i> in high-end occupations as a major challenge in the sector. | 1 (very low) |
| Atkinson, 2002, p. 6 | An Occasional Paper by the Integrated Rural and Regional Development Research Programme notes that very few municipalities have the skills or experience to provide the entrepreneurial support required for LED initiatives. | 1 (very low) |

zz) General research skills

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in research skills was identified. | 1 (very low) |

Capacity Needs for the Water Services Sector

| | | |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 47 | Quantitative and qualitative data were integrated to determine the top 5 skills needs, as well as additional generic and technical skills priorities, for staff in water and waste services. A very significant shortage in research skills was identified. | 1 (very low) |
| Department of Labour, 2001, p. 41 | The Public Service Review Report of 1999 identified a general lack of research skills in the public service. | 1 (very low) |

aaa) Obtaining and interpreting sex-disaggregated statistics

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |

bbb) Participatory rural appraisal (PRA) methods

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in research skills was identified. | 1 (very low) |

ccc) Relational analysis (exploring the relative position of women and men in society)

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various SOCs in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project | 1 (very low) |

| | | |
|--|---------------------------------------------|--|
| | management, financial and research skills). | |
|--|---------------------------------------------|--|

ddd) Survey and interviewing techniques

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various Standard Occupation Categories (SOCs) in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |
| LGWSETA Sector Skills Plan 2003-2005, p. 46 | The top 5 specific, generic and technical skills needs among LED staff were identified by integrating quantitative and qualitative data. A very significant shortage in research skills was identified. | 1 (very low) |

eee) Task analysis (exploring different activities of men and women)

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various SOCs in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |

fff) Utilising gender planning checklists for project planning

| Reference | Description | Skill Availability Rating |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| LGWSETA Sector Skills Plan 2003-2005, p. 37 | CEO's, HR and line managers in the Local Government, Water and Related Services Sector were surveyed. Respondents were asked to rank the various SOCs in the sector in terms of the problems experienced with turnover, vacancies and skill shortages over the past 2 years. SOC 200 (Professionals) was rated first, suggesting very low availability of generic skills related to this category (e.g. project management, financial and research skills). | 1 (very low) |

10.2.5 'Goodness of Fit' Between Required Skills and Training Courses by PPETDs

The following Table presents information regarding the "Goodness of Fit" between skills requirements as identified by Schoeman et al. (2005) and available training courses identified that

Capacity Needs for the Water Services Sector

have been developed and are presented by Private Providers of Education Training and Development (PPETDs). A three-point Likert Rating Scale has been utilised to indicate the degree of fit, with 3 indicating a "Very Good" fit and 1 indicating a "Very Poor" fit.

| SKILLS GAP | NUMBER OF AVAILABLE COURSES / UNIT STANDARDS | GOODNESS-OF-FIT (Suitability of available Courses / Unit Standards) | TARGET GROUP | | | | | | |
|---------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------|---------------------------|---------------------------------|-----------------|-----------------|--------------|----------|-----------------------------|
| | | | Leadership and governance | Management and senior officials | Technical staff | Financial Staff | HR and Admin | Services | Crafts & Elementary workers |
| FOUNDATIONAL SKILLS | | | | | | | | | |
| Listening skills | 3 | 1 (only unit standards available, no course) | ✓ | ✓ | | | ✓ | | |
| Teamwork | 3 | 1 (only unit standards available, no course) | ✓ | | | | ✓ | | ✓ |
| Acceptance of diversity | 2 | 2 (generic need courses) | ✓ | ✓ | | | ✓ | ✓ | ✓ |
| Time Management | 3 | 2 (generic) | ✓ | | | | | ✓ | |
| Telephone Skills | 1 | 2 (unit standard is fit, but no course available specifically for switchboard operators) | | | | | | ✓ | |
| Basic literacy | 6 | 2 (unit standards relevant, but maybe a course on basic literacy required) | | | | | | ✓ | ✓ |
| Numeracy | 6 | 2 (unit standards relevant, but maybe a course on basic numeracy required) | | | | | | ✓ | ✓ |
| Formal writing skills | 3 | 1 (not really on management standard) | ✓ | ✓ | | | | | |
| Knowing how to learn | 2 | 1 (unit standards provide some guidelines, but not enough) | | | | | | | ✓ |
| GENERIC SKILLS | | | | | | | | | |
| People management/people skills | 2 | 1 (does not really cover people management/skill) | ✓ | ✓ | | | ✓ | | |
| Project management | 6 | 2 (generic courses | | ✓ | ✓ | | | | |

Capacity Needs for the Water Services Sector

| SKILLS GAP | NUMBER OF AVAILABLE COURSES / UNIT STANDARDS | GOODNESS-OF-FIT (Suitability of available Courses / Unit Standards) | TARGET GROUP | | | | | | |
|--------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------|---------------------------------|-----------------|-----------------|--------------|----------|-----------------------------|
| | | | Leadership and governance | Management and senior officials | Technical staff | Financial Staff | HR and Admin | Services | Crafts & Elementary workers |
| | | available, content is sufficient, but not water/public sector based) | | | | | | | |
| Financial skills | 21 | 2 (content is good, but not enough focus on public finance and finance in the water sector) | ✓ | ✓ | | ✓ | | | |
| General technical skills | 0 | 0 | | | ✓ | | | | ✓ |
| Health and safety skills | 11 | 3 | | | ✓ | | | | ✓ |
| Operation and maintenance of equipment | 2 | 1 (think additional courses needs to be developed) | | | ✓ | | | | ✓ |
| Conflict Management | 3 | 2 (unit standards have sufficient content, but no courses available) | ✓ | ✓ | | | ✓ | | |
| Reporting/report writing | 2 | 2 (unit standards have sufficient content, but no courses available) | ✓ | ✓ | | | | | |
| HR Management | 5 | 3 | | | | | ✓ | | |
| Communication and PR | 12 | 3 | ✓ | ✓ | | | ✓ | | |
| Costumer relations/customer services | 11 | 2 (Available unit standards provide good insight, but think courses needs to be developed | | | | | | | |
| Information and Computer technology skills | 8 | 3 | ✓ | | | ✓ | ✓ | | |
| Knowledge of own role/organisation's role | 1 | 1 (one unit standard not enough, need courses) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Legal and contractual knowledge | 1 | 1 (one unit standard not enough, need courses) | | ✓ | | | ✓ | | |
| Diversity management | 3 | 2 (generic, need | | ✓ | | | ✓ | | |

Capacity Needs for the Water Services Sector

| SKILLS GAP | NUMBER OF AVAILABLE COURSES / UNIT STANDARDS | GOODNESS-OF-FIT (Suitability of available Courses / Unit Standards) | TARGET GROUP | | | | | | |
|------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------|---------------------------------|-----------------|-----------------|--------------|----------|-----------------------------|
| | | | Leadership and governance | Management and senior officials | Technical staff | Financial Staff | HR and Admin | Services | Crafts & Elementary workers |
| | | courses) | | | | | | | |
| Change Management | 1 | 1 (one unit standard not enough, need courses) | | ✓ | | | ✓ | | |
| Problem solving | 3 | 2 (unit standards provide good insight, but courses needed) | ✓ | | | | | | |
| Strategic and business management/planning | 9 | 2 (overall 2, but in terms of business management a 3) | ✓ | ✓ | | | | | |
| Monitoring and evaluation | 0 | 0 | | ✓ | ✓ | | ✓ | | |
| General research skills | 2 | 1 (unit standards have good content, but not enough) | | | ✓ | | | | |
| Maintenance management | 6 | 2 (generic, courses aimed specifically at maintenance management needs to be developed) | | | ✓ | | | | |
| Capacity building and educational skills | 0 | 0 | | | | | ✓ | | |
| Facilitating public/community participation | 2 | 2 (generic) | ✓ | | | | ✓ | | |
| Knowledge of governmental institutional arrangements | 1 | 2 (unit standard very relevant, because it is water related, but additional courses required) | ✓ | ✓ | | | ✓ | | |
| Knowledge of local government | 7 | 2 (need for shorter courses on local government) | ✓ | ✓ | | | | | |
| Office administration | 3 | 3 | | | | ✓ | ✓ | ✓ | |
| TASK-SPECIFIC SKILLS FOR WSA FUNCTIONS | | | | | | | | | |

Capacity Needs for the Water Services Sector

| SKILLS GAP | NUMBER OF AVAILABLE COURSES / UNIT STANDARDS | GOODNESS-OF-FIT (Suitability of available Courses / Unit Standards) | TARGET GROUP | | | | | | |
|------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------|-----------------|-----------------|--------------|----------|-----------------------------|
| | | | Leadership and governance | Management and senior officials | Technical staff | Financial Staff | HR and Admin | Services | Crafts & Elementary workers |
| Bylaws for water services and credit control | 0 | 0 | ✓ | ✓ | | | | | |
| Free basic sanitation policy | 0 | 0 | ✓ | ✓ | | | | | |
| Infrastructure development | 0 | 0 | | ✓ | ✓ | | | | |
| Water Services Provider contractual arrangements | 3 | 1 (unit standards provide good insight on general contractual arrangements, but not related courses for Water Services Providers) | ✓ | ✓ | | | | | |
| Performance management and regulation | 4 | 2 (courses available addresses performance management, but no course specifically on performance management) | | ✓ | | | ✓ | | |
| Risk and disaster management | 3 | 1 (good basis, but based on generic and financial sectors, no courses available on disaster management) | | ✓ | ✓ | | | | |
| Reporting and accountability | 1 | 1 (one unit standard not enough) | ✓ | ✓ | | | ✓ | | |
| Knowledge of water-related legislation | 2 | 3 (in terms of unit standards) | ✓ | ✓ | ✓ | ✓ | | | |
| Compilation of Water Services Development Plans (WSDP) | 0 | 0 | ✓ | ✓ | | | | | |
| Development of a system for WSDP reporting and water services auditing | 0 | 0 | | ✓ | ✓ | ✓ | | | |
| Linking WSDPs, IDPs and WR planning | 3 | 1 (only unit standards on IDPs, not on WSDPs or | ✓ | ✓ | ✓ | | | | |

Capacity Needs for the Water Services Sector

| SKILLS GAP | NUMBER OF AVAILABLE COURSES / UNIT STANDARDS | GOODNESS-OF-FIT (Suitability of available Courses / Unit Standards) | TARGET GROUP | | | | | | |
|---------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------|-----------------|-----------------|--------------|----------|-----------------------------|
| | | | Leadership and governance | Management and senior officials | Technical staff | Financial Staff | HR and Admin | Services | Crafts & Elementary workers |
| | | WR Planning) | | | | | | | |
| Water Conservation and Demand Management | 0 | 0 | | ✓ | ✓ | | | | |
| TASK-SPECIFIC SKILLS FOR WSP FUNCTIONS | | | | | | | | | |
| Setting conditions for provision of water services | 0 | 0 | | ✓ | | | | | |
| Financial Management | 21 | 2 (content is good, but too generic, course needed for financial management for Water Services Providers) | | ✓ | | | | | |
| Contract management | 1 | 1 (one unit standard not enough) | | ✓ | | | | | |
| Customer relations and communication | 12 | 2 (communication courses good, additional courses for customer relations required) | | | | | | ✓ | |
| TASK-SPECIFIC SKILLS FOR ADDRESSING CROSS-CUTTING PRIORITIES | | | | | | | | | |
| Skills to implement Local Economic Development (LED) initiatives | 6 | 3 | ✓ | ✓ | ✓ | ✓ | | | |
| Stakeholder participation skills | 2 | 3 | ✓ | ✓ | ✓ | | ✓ | | |
| Mainstreaming a Gender Perspective | 1 | 3 (with regard to unit standard) | ✓ | ✓ | ✓ | | ✓ | ✓ | |
| Co-operative Governance skills | 3 | 3 | ✓ | ✓ | ✓ | | | | |
| Batho Pele Principles of Public Service Delivery | 1 | 3 (with regard to unit standard) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Holistic understanding of WSA and WSP functions | 0 | 0 (urgently needs to be developed) | ✓ | ✓ | ✓ | ✓ | ✓ | | |

10.3 APPENDIX 3: REPORT ON THE BREAKDOWN OF
OCCUPATIONAL CATEGORIES AND ASSOCIATED
FUNCTIONS FOR WSAS AND WSPS

**ASSESSMENT OF TRAINING PROGRAMMES AND CAPACITY
NEEDS FOR THE WATER SECTOR**

**Background Report for the Identification of WSA and WSP
Functions and Skills**

Geraldine Schoeman

AFROSEARCH

Development Consultants

P O Box 13540

Hatfield

0028

South Africa

(012) 362 2908

gera@afrosearch.co.za

10.3.1 Introduction

This document outlines the methodology and results of a desktop study that was conducted to identify the various occupational categories found in a typical municipality. It also identifies the duties and tasks associated with each occupational category. This data may serve as a basis for identifying training requirements in municipalities.

10.3.2 Methodology

Data collection proceeded in two phases. The objective of the first phase was to determine the functions and duties for WSAs and WSPs duties while the second phase aimed to compile a typical municipal organogram and required qualifications associated with each position in such an organogram. These two phases are outlined in greater detail below.

10.3.3 Regulatory-based Functional Requirements¹⁶

The skills required by a WSA will depend on which of its functions are contracted out and which are retained:

- ❖ All WSAs must have the skills required for the performance of core functions;
- ❖ Skills necessitated by a given non-core function are required only by those WSAs who decide not to subcontract that particular function;
- ❖ In the event that a WSA decides to subcontract certain functions, it will require skills related to managing the subcontracting process.

The skill requirements for each of the functional areas of a WSA are listed below. In each case, a distinction is made between skills required for core functions and those required for non-core functions. A further distinction is drawn between subject-related and task-specific skills:

- ❖ Subject-related skills occupy the middle of the skills pyramid; they are more specialised than foundational skills, but more general than task-specific skills.
- ❖ Task-specific skills occupy the apex of the pyramid. These are essential because subject-related skills by themselves are too general to be useful in a workplace; they need to be nuanced against particular micro-contexts and against specific job functions.

a) Policy Development and Bylaws

| Skills required for non-core functions (not essential if these functions are outsourced) | |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Legal and contractual knowledge Knowledge of local government Problem solving Public administration | Developing a water services policy Developing tariff, debt collection and credit control policies Developing procurement policy and policy to direct decisions on capital investment in infrastructure Draft credit control and debt collection and water services bylaws |
| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
| Subject-related skills | Task-specific skills |
| Communication and PR Monitoring and evaluation | Communicating water services policy to relevant stakeholders Monitoring and evaluating implementation of policies |

¹⁶ Extracted from the Report entitled 'Required Skills for WSA and WSP Functioning by Schoeman, G et al. (2005)

b) Financial Planning and Management

| Skills required for non-core functions (not essential if these functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Financial planning | Developing tariff structure |
| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
| Subject-related skills | Task-specific skills |
| Budgeting Financial planning Financial management, statements and reporting Funding | Developing a water services budget Ring-fencing water services revenue and expenditure Accessing grants and loans for water services Allocating equitable share and other subsidies within water services budget Formulating financial statements Financial record-keeping |

c) Water Services Development Planning (WSDP)

| Skills required for non-core functions (not essential if these functions are outsourced) | |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Information management ITC Monitoring and evaluation Planning | Developing a water services information system Preparing a WSDP Developing a monitoring and evaluation system for WSDP implementation |
| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
| Subject-related skills | Task-specific skills |
| Computer skills Information management ITC Data capture Communication and PR Community Participation Auditing and review | Collecting information regarding water services from all WSPs Using an electronic WSDP decision support system to make water and sanitation services decisions Stakeholder participation in the WSDP process Monitoring the implementation of a WSDP Conducting a Water Services Audit |

d) Infrastructure Development

| Skills required for non-core functions (not essential if these functions are outsourced) | |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Strategic management Planning Technical skills Budgeting Financial planning | Developing strategies for implementing basic water supply and household sanitation programmes Water supply and sanitation project feasibility assessments Integrated planning of water and sanitation services Assessing the viability of waterborne sanitation schemes Project business planning and costing Identifying preferred IAs and WSPs for water services systems |

| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Communication and PR | Knowledge of the White Paper on Basic Household Sanitation Promoting and facilitating the construction of at least basic toilet facilities Identifying water supply and sanitation backlogs Prioritising projects |
| Legal and contractual knowledge | Contracting implementing agents and WSPs for water services systems |
| Project management | Project management, monitoring and reporting |

e) Water Services Provider (WSP) Arrangements

| Skills required for non-core functions (not essential if these functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Public admin Strategic management | Undertaking Section 78 internal and external assessments Providing support for establishment of CBO WSPs |
| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
| Subject-related skills | Task-specific skills |
| Financial management, statements and reporting | Preparing Terms of Reference for section 78 internal and external assessments Making decisions regarding WSP institutional arrangements Assessing business/ operational plans of WSP units |

f) Performance Management and Regulation

| Skills required for non-core functions (not essential if these functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Human resources Strategic management | Developing performance management and monitoring systems Formulating key performance indicators |
| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
| Subject-related skills | Task-specific skills |
| Monitoring and evaluation Conflict management People skills Negotiating | Monitoring access to water services provision Monitoring and enforcing WSP contractual compliance Monitoring impact of water services on the environment Resolving disputes between WSPs and consumers |

g) Health and Hygiene Promotion

| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|----------------------------------------|
| Subject-related skills | Task-specific skills |
| Communication and PR | Health and hygiene promotion programme |

| | |
|--|-------------------------------------------------------------------------------------------|
| | Knowledge of the Protocol to Assess the Groundwater Impacts of On-Site Sanitation Options |
|--|-------------------------------------------------------------------------------------------|

h) Water Conservation and Demand Management

| Skills required for non-core functions (not essential if these functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Technical skills Strategic management / planning | Preparing a water conservation / demand management strategy |
| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
| Subject-related skills | Task-specific skills |
| Technical skills Information management | Calculating a water balance on water services delivery infrastructure Keeping record of the percentage of water losses |

i) Reporting and Accountability

| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Communication and PR | Sharing information with relevant stakeholders |

j) Asset Management and Legal Matters

| Skills required for non-core functions (not essential if these functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Maintenance of equipment Technical skills Legal and contractual knowledge | Compiling operation and maintenance manuals Drafting WSP service agreement contracts |
| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
| Subject-related skills | Task-specific skills |
| Legal and contractual knowledge Negotiating Communication and PR Information management | Purchasing insurance for assets Obtain permits, licenses, exemptions, permissions and approvals necessary for the provision of water services Keeping an asset register Ensuring community consultation and information dissemination regarding WSP contracts Facilitating inter-departmental relationships with WSPs and various departments of the WSA |

k) Transfer of Assets

| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Information management | Implement a section 78 process to identify an appropriate WSP for the scheme(s) to be transferred Participate with DWAF in the transfer processes |

| | |
|--|-----------------------------------------------------------------------------|
| | Verify details of water services infrastructure and staff to be transferred |
|--|-----------------------------------------------------------------------------|

l) WSA Structural and Organisational Issues

| Skills required for core functions (essential regardless of whether any functions are outsourced) | |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Human resources Capacity building and education | Compiling WSA organogram Identifying restructuring, capacity building, training, recruitment and organisational development requirements of the WSA |

Skills Required for Water Services Provider Functions

One of the functions that a WSA may subcontract is the actual provision of water services. The agency to which provision functions are delegated is referred to as a water services provider (WSP), which may be any of the following:

- ❖ A Water Board
- ❖ A Water Services Committee
- ❖ A private company or individual.

The skill requirements for each of the functional areas of a WSP are listed below. The distinction between subject-related and task-specific skills, which was introduced in the previous section, is retained here.

m) Setting Conditions for Provision of Water Services (WSP)

| Skills required | |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Financial planning Legal and contractual knowledge | Tailoring approach to low income areas Addressing the issue of non-revenue Water Providing information to WSA for Water Services Development Plan Setting technical conditions for water supply Setting conditions for payment and discontinuance of supply Promoting water conservation and demand management Developing a model consumer charter |

n) Financial Management (WSP)

| Skills required | |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Financial planning Financial management, statements and reporting Debt collection Communication and PR | Developing investment plans Raising grant and loan funds Developing a budget for the WSP Managing billing and revenue collection Implementing debt collection and credit control systems Implementing a public education programme regarding payment for water services Revenue management Meter reading Billing and revenue collection |

o) Planning (WSP)

| Skills required | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Financial planning Planning | Compiling a water services business plan Technical planning re levels of service, etc. Operations planning |

p) Water Services Provision Functions (WSP)

| Skills required | |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Maintenance of equipment Mechanical skills Technical skills | Standard operating procedures Operations and maintenance manuals Maintenance management Energy management Flow and pressure management Managing the pumping & purification of water Managing the distribution of water to customers Managing the collection, treatment and disposal of waste water Providing water supply other than through pressure networks Providing sanitation services other than waterborne sewage |

q) Customer relations and communication (WSP)

| Skills required | |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Customer relations Communication and PR | Maintain channels for communication with consumers Dealing with complaints Assess customer needs and problems |

r) Health and Hygiene Promotion (WSP)

| Skills required | |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Communication and PR Health and safety | Implementing a health and sanitation awareness programme Monitoring the impact of a health and sanitation awareness programme |

s) Contract Management

| Skills required | |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Legal and contractual knowledge | Drafting contracts for subcontracting of WSP functions Monitoring the execution of subcontracted functions, and enforcing compliance |

t) Reporting and Accountability (WSP)

| Skills required | |
|------------------------|----------------------|
| Subject-related skills | Task-specific skills |

| | |
|----------------------------|----------------------------------------------------------------------------------|
| Communication Reporting | Providing information to stakeholders concerning the provision of water services |
|----------------------------|----------------------------------------------------------------------------------|

Skills Required To Fulfil Overarching Imperatives

The responsibilities of a WSA extend beyond the governance and provision of water services. It also has to ensure that all its functions are performed in such a way as to conform to certain general principles and priorities for governance that are enshrined in the Constitution and other legislation. The most pertinent of these principles and priorities are:

- ❖ Local economic development
- ❖ Stakeholder participation
- ❖ Gender mainstreaming
- ❖ Co-operative governance
- ❖ The Batho Pele principles

Each of these imperatives is described below, followed by a list of the skills required to ensure that it is met.

u) Local Economic Development (WSA & WSP)

Local economic development (LED) is essential for job creation and poverty alleviation. The water services sector is in a position to play a significant role in LED. Municipalities can give preference to emerging local companies when deciding on subcontractors, for example. In this way, water, sanitation and community-based public works projects can promote the development of emergent entrepreneurs as a useful by-product of infrastructure provision.

| Skills required | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Broad theoretical understanding of LED Monitoring through an input-output-outcome-impact model Project financing and writing of business plans Capacity building and training skills Conflict mediation | Understanding the link between LED and Integrated Development Planning Understanding the institutional arrangements for LED and the importance of project and programme management Capacity building and training at community level Establishing community committees Defining tasks and functions of various stakeholders with regard to LED Providing administrative support to communities |

v) Stakeholder Participation (WSA & WSP)

Development issues can only truly be addressed by the participation and co-operation of local role-players in planning and development processes. Such participation will allow each local community to determine the priorities, policies and actions of its particular development agenda. The Municipal Systems Act of 2000 also recognises the importance of stakeholder participation. Under section 4 (2) (c), it compels municipalities "to encourage the involvement of the local community," and under Section 4 (2) (e) it exhorts them "to consult the local community about the level, quality, range and impact of municipal services provided by the municipality, either directly or through another service provider; and the available options for service delivery."

| Skills required | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Participatory rural appraisal (PRA) methods Survey and interviewing techniques Facilitating effective participation of the public Engaging civil society organisations in creating a link between government and local communities | Examining the demographic profile and current institutional framework of civil society organisations (CBOs and NGOs) Formulating strategies for informing, inviting and involving interested stakeholders Engaging civil society organisations in planning, implementation and management of projects at community level Engaging civil society organisations in policy development, research and advocacy Encouraging civil society organisations to help monitor sector performance |

| | |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Investigating possible constraints to participation Finding ways of addressing those constraints | Supporting the development of capacity in civil society organisations Assisting in the mobilisation of funds for non-government and community-based organisations |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

w) *Mainstreaming a Gender Perspective (WSA & WSP)*

The UNDP defines gender mainstreaming as: "Taking account of gender equity concerns in all policy, programme, administrative and financial activities, and in organizational procedures, thereby contributing to a profound organizational transformation." The importance of gender mainstreaming in the water services sector derives from the fact that women and men differ in their needs and responsibilities with regard to water services and sanitation. Women often bear the brunt of absent or poor water services, and are therefore key stakeholders in the sector.

However, many women are prevented from taking up their stakeholder role by cultural stereotypes, the challenge of balancing work and family commitments, a shortage of skills and a lack of self-confidence. Such constraints can only be overcome by means of a targeted effort to empower women to play a meaningful role at all levels in consultations, planning, decision making and in the operation and management of water services.

| Skills required | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Obtaining and interpreting sex-disaggregated statistics Task analysis in which the activities of men and women are defined Relational analysis, which explores the relative position of women and men in society Gender planning checklists for project planning | Responding to the different responsibilities and needs of women and men Allowing for gender differences in the way women and men engage in the planning, implementation and management of programmes and projects Empowering women Sensitising men to the needs and priorities of women |

x) *Co-operative Governance (WSA & WSP)*

The essence of co-operative governance is the requirement that all spheres of government and organs of state must co-operate with one another in mutual trust and good faith by fostering friendly relations, assisting and supporting one another, informing and consulting one another and co-ordinating their actions. Co-operative governance forms one of the cornerstones of South Africa's water policy. This policy recognises that, although many government functions are undertaken in national, provincial or local spheres, there must be commitment to co-operation between each sphere, since it has a profound effect on water resource management and the provision of water and sanitation services.

| Skills required | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Broad theoretical understanding of co-operative governance Knowledge of governmental institutional arrangements Linking water services development plans (WSDPs) and integrated development plans (IDPs) Linking WSDPs and water resource planning | Identifying the various directorates/ departments/officials at national, provincial and local government level who are (or should be) actively involved in water services matters Establishing contact with these directorates/ departments/officials Developing a communication strategy with them |

y) *The Batho Pele Principles (WSA & WSP)*

The Batho Pele White Paper is the National Government's White Paper for Transforming Public Service Delivery. Its central focus is the provision of good customer service to the users of government services. It lists a number of general principles for excellence in service delivery. These are:

- ❖ Consulting with customers
- ❖ Setting service standards
- ❖ Improving access of previously disadvantaged groups to services
- ❖ Courtesy
- ❖ Providing customers with information about services
- ❖ Openness and transparency

- ❖ Giving customers the opportunity to demand redress for poor service
- ❖ Giving customers best value for their money
- ❖ Innovation and reward
- ❖ Assessing the impact of applying the aforementioned principles

| Skills required | |
|----------------------------------------|------------------------------------------------------------------------------------------------|
| Subject-related skills | Task-specific skills |
| Knowledge of the Batho Pele Principles | Incorporating the Batho Pele Principles into the customer relations functions of WSAs and WSPs |

10.3.4 Compiling a typical municipal organogram

A Web search was conducted to identify municipal websites containing information about the municipality's organogram or organisational structure. This search yielded several hits, including (but not limited to):

- ❖ Umzinyathi District Municipality
- ❖ Kwa Sani District Municipality
- ❖ Nkangala District Municipality
- ❖ Umjindi Municipality
- ❖ Motheo District Municipality
- ❖ Stellenbosch Municipality
- ❖ Sekhukuni District Municipality
- ❖ Abaqulusi Local Municipality

A proposed structure for a municipality was also obtained from a website entitled "*Lessons regarding municipal restructuring in non-metropolitan areas*."¹⁷

A significant degree of similarity was found to exist between the organograms of the aforementioned municipalities, as well as between these and the structure proposed by Atkinson *et al.* A composite municipal organogram was therefore compiled by averaging across all organograms obtained from the Web search. This organogram is presented in the following section.

10.3.5 Identifying duties and required qualifications

Most organograms obtained during the aforementioned Web search identified departments within a municipality and units within departments. Little information could be obtained about individual posts within units or departments. It was therefore not possible, on the basis of the organograms alone, to identify duties and required qualifications associated with occupational categories.

In order to obtain such data, a search was conducted of job vacancies in municipalities that are advertised on the Worldwide Web. Information contained such advertisements include job titles, required duties and minimum qualifications. In many instances, job advertisements also indicate the department in which incumbents would be appointed. It was therefore possible to reconcile the data obtained through this Web search with the composite municipal organogram, thereby increasing the level of detail in the organogram to include individual occupations. Data with regard to the required functions of some positions (such as that of Municipal Manager) was also obtained from requirements outlined in the Municipal Structures Act.¹⁸

10.3.6 Occupational categories within a municipality

The various occupational categories found in each department or unit are outlined in the table below. This table also indicates the functions and required qualifications associated with each occupational category.

The following specific definitions have been used in respect of each of the occupational categories:

Senior officials and managers: People who plan, direct and co-ordinate the activities of a business/organization in either the private or the public sector. *Examples are chief executives,*

¹⁷ Doreen Atkinson, Ntobeka Buso, Daniel Pienaar (HSRC) and Shai Makgoba, www.ksp.org.za/holon19.htm

¹⁸ Act No. 117 of 1998.

managing directors, administration, financial, production and catering managers, school principals, etc. Examples: CEO, Regional or Divisional Managing Directors, Dealer Principals, Marketing Directors

Professionals: People who possess a high level of professional knowledge and experience in a field of physical and life science or the social sciences and humanities. *Examples are scientist, engineers, computer programmers, accountants, teaching professionals, management consultants, medical practitioners, priests, attorneys, social workers, etc. Examples: Financial Controllers, Service Managers, Parts Managers, Sales (new/used) Managers*

Technicians and associated professionals: People who possess technical knowledge and experience in a field of the physical and life sciences or the social sciences and humanities. *Examples are clerks of work, pilots, reporters, telecommunication technicians, nursing assistants, insurance agents, property agents, etc. Examples: Workshop Supervisors, Workshop foreman, Quality Controllers*

Clerks and administrative staff: People who organize, store, compute and retrieve information. Typical tasks are secretarial duties, operating word processors and other office machines, recording and computing numerical data, mail services, money-handling operations and appointments. *Examples are secretaries, messengers, coders, cashiers, tellers, switchboard operators, administrative assistants, bookkeepers, and store clerks, etc. Examples: Secretaries, Clerical staff*

Service workers: People who provide personal and protective service or who sell goods in shops or at markets. *Examples are transport conductors, police officers, shop attendants, cooks, waiters, retail sales workers, hairdressers, prison wardens, etc. Examples: Vehicle salespersons, Parts salespersons*

Agricultural and fishery workers: People who grow crops, breed or hunt animals, breed or catch fish or cultivate or harvest forests. *Examples are farmers, crop growers, fishermen, horticulturists, forestry workers, etc.*

Skills workers: People who apply the knowledge and experience of skilled trades and handicrafts to extract raw materials, construct buildings and other structures or make various products, including handicraft goods. *Examples are miners, ore processors, bricklayers, carpenters, plumbers, electricians, painters, aircraft mechanics, welders, glass-makers, fitter and turners, boiler makers, clothes and shoemakers, locksmiths, etc. Examples: Journeyman, BA Journeyman, Exempted Journeyman*

Plant and machine operators and assemblers: People who operate and monitor large-scale and often highly automated industrial machinery and equipment. *Examples are lathe operators, railway signallers, Production supervisors; mine drills operators, assembly line workers, etc. Examples: Repair Shops assistants, Body Shops assistants, Drivers of heavy-duty vehicles, Operatives, Armature winders*

Labourers: People who perform mostly simple and routine tasks, involving the use of hand-tools and in some cases considerable physical effort, and generally only limited personal initiative and judgement. *Examples are newsvendors, tinkers, char workers, sweepers, garbage collectors, kitchen workers, farm hands, door-to-door and telephone sales persons, construction workers, quarry workers, security guards, caretakers, etc. Examples: Cleaner, General workers, forecourt attendants, Driver of light motor vehicles, motorcycles and scooters*

Table 18: Occupational Categories and Associated Functions in respect of WSAs & WSPs

| | Position | Functions | Required qualifications |
|------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Leadership / Strategic Management | | | |
| | Mayor and Executive Mayor | | |
| | Councillors | | |
| | Municipal Manager | Head of Administration Responsible for the strategic direction of the Council Attract new business investment in Municipality Promote Local Economic Development in municipal area Work in collaboration with Executive Mayor Duties as outlined in Municipal Systems Act Section 55(1) | Tertiary Qualification (pref. Public Administration). Required skills: Leadership, managerial, knowledge of local government, strategic thinking, decision-making, financial and planning |
| Department: Corporate Services | | | |
| | Director: Corporate Services | Senior management functions Serve on IDP Steering Committee by: *Providing relevant technical, sector and financial information for analysis for determining priority issues; *Contributing technical expertise in the consideration and finalisation of strategies and identification of projects; *Providing departmental operational and capital budgetary information; *Being responsible for the preparation of project proposals, the integration of projects and sector programmes, and *Being responsible for preparing amendments to the Draft IDP for submission to the municipal council for approval and to the MEC for Local Government for alignment. | Tertiary Qualification (field not stated). Required skills: Leadership, managerial, knowledge of local government, strategic thinking, decision-making, financial and planning |
| Communications | | | |
| | Public Relations / Media Liaison Officer | Coordinate liaison with media. Prepare media reports and interviews. Release approved information to Public. Report on progress on municipal projects. Keep up to date information for public access. Handle public and media enquiries. Keep records of media releases. Keep up to date with media comments / reports on municipality. | B. degree in Communication |
| | Communications, Research & Information Officer | *Assist Area Project Manager in marketing the area *Maintain updated METGIS system and website *Operate as a Local Resource Centre, *Manage local website and provide a contract and partnership brokering service to partners. | Relevant degree or diploma |
| | Information and Communications Technology specialist | Install and maintain computer based information systems and software. Provide assistance to users of micro-computers and standard software packages, control and operate computers and peripheral equipment and carry out programming tasks related with the installation and maintenance of computer hardware and software. | Computer Operator Course Computer Programming Course |
| | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|--------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Human Resources | | | |
| | Manager: Human Resources | | |
| | Administration Clerk Human Resources | Type documents and make copies. Keep records of the section. Compile statistics on personnel matters. Maintain document management system. Update personnel policies and records. Respond to enquiries and refer to relevant officers. Keep records of enquiries and responses. Distribute recruitment adverts internally. Compile personnel records. Assist in responding to applications. Update finance/payroll on staff changes. Arrange venues for meetings and workshops for the section. | Grade 12 with typing skills & computer literacy |
| | Human and labour relations | Dispute resolution, etc. | Bachelor's degree or National Diploma in either Labour Relations or Human Resources |
| | Performance management administrator | Performance management, assessment of performance against KPIs | Bachelor's degree or National Diploma in Human Resources |
| | Skills Development Facilitator | Conduct skills audits Compile Workplace Skills Plans | Degree in Public Administration |
| | Manager: Corporate Safety | *Develop Corporate Safety Programme and co-ordinate implementation *Advise City Manager, heads and safety committees on actions necessary to maintain adequate safety standards throughout the corporation *Develop a Corporate Services Unit Safety Programme and co-ordinate implementation *Assist City Manager to fulfil his duties and responsibilities in terms of the machinery and Occupational Safety Act *Undertake lectures to students and outside organisations relevant to the work of the Section and read papers at professional seminars as required. | National Diploma - Safety Management (NAD-SAM) |
| | Occupational Health Officer | *Investigate accidents and carry out inspection of work activities and report on the existence of any dangerous conditions or practices *Check on availability, condition and use of safety appliances *Formulate safety rules and regulations designed to prevent accidents *Update safety manuals for each Service Unit *Ensure Service Unit compliance with all aspects of the machinery and Occupational Safety Act, 1983 and regulations framed there under | Recognized three year diploma/degree |
| | Legal Officer | Research • providing legal and administrative support to the Chief: Legal Services • providing a support service regarding disciplinary processes internal hearings) • representing the Municipality at the CCMA and Bargaining Council. | LLB or equivalent |
| | Salaries & leave administration clerk | *Provide a complete administrative/clerical/secretarial service to the Manager *Preparation of agenda for meetings. *Undertake related projects, assignments and research whenever requested by Manager | Secondary education |
| | | | |
| Office administration (for various departments) | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|---------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Secretary/ Personal Assistant | <ul style="list-style-type: none"> *Plan efficient and effective office secretarial system *Provide secretarial services *Organise and co-ordinate services. | Senior certificate (Grade 12) and a 3-year secretarial diploma; computing skills |
| | Administration Officer: Councillors | Prepare council bundles. Facilitate the delivery of council bundles to councillors. Take minutes during council meetings. Write council resolutions. Type resolutions. Ensure distribution of council resolutions to relevant stakeholders Co-ordinate Committee meetings Compile and distribute meeting bundles Take minutes of committee meetings. Write committee resolutions. Develop and maintain up to date record system. Keep a register of documents. Control the movement of record files. Ensure maintenance of archive system | Grade 12. Incumbent should have a Computer literate and have Typing skills. |
| | Office Assistant | <ul style="list-style-type: none"> *Collect and deliver files and documents within department and other units in the Old Fort complex. *Provide counter services. | Secondary education |
| | Administration Officer: Cellular Telephones | <ul style="list-style-type: none"> *Management staff *Control operations in all sub-section (correspondence, typing, photostating, switchboard and messengers). *Control all cellular telephones in the department and ensure staff keep to budget. *Monitor use/ costs of cellular telephones. *Ensure cellular telephones are charged and signed for on a daily basis. | Secondary education |
| Department: Financial Services | | | |
| | Municipal Finance Manager | Senior management functions Serve on IDP Steering Committee by: <ul style="list-style-type: none"> *Providing relevant technical, sector and financial information for analysis for determining priority issues; *Contributing technical expertise in the consideration and finalisation of strategies and identification of projects; *Providing departmental operational and capital budgetary information; *Being responsible for the preparation of project proposals, the integration of projects and sector programmes, and *Being responsible for preparing amendments to the Draft IDP for submission to the municipal council for approval and to the MEC for Local Government for alignment. | Tertiary Qualification (pref. In Finance). Required skills: Leadership, managerial, knowledge of local government, strategic thinking, decision-making, financial and planning |
| | Corporate Executive: Departmental Accounting | Ensure compliance with Financial Regulations Standing Orders and Code of delegation. Manage operating and capital budgets and annual financial statements of the cluster. | B Comm. or equivalent with accounting and administration |
| Accounting & Budgeting | | | |
| | Accountant | Assist with the implementation of GAMAP and Budget Reforms. Developing of statistical reporting modules. Developing financial policies and procedures. Electronic capturing of data | B.Comm. Degree with Accounting I, II and III as subjects |
| | Financial Officer – Budget | <ul style="list-style-type: none"> *Co-ordinate and compile Draft Estimate Report in accordance with the Municipal Finance Management Act * Publication of budgets *Management of staff | *B Com or CA (SA), Associate member of CIS or equivalent accounting qualification (M+3) |
| | Financial Officer - Capital | *Overall accounting service to the Finance departments of the Municipality relative to Capital Budgeting, monitoring of capital expenditure and Asset Register maintenance as per MFMA and GAMAP requirements. | *B Com or CA (SA), Associate member of CIS or equivalent accounting |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|--------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| | | *Manage staff *Related assignments and special investigations. | qualification (M+3) |
| | Financial Officer - Financial Statements | *Meet Council's obligations with regard to Value-Added Tax (VAT), Pay As You Earn (PAYE) and tax related issues. *Ensure correct receipt, allocation and distribution of Business Levies and Equitable Share Subsidy in compliance with Division of Revenue Act *Manage staff *Related assignments and special investigations. | B. Com; CA; postgraduate qualification in taxation |
| | Creditors clerk, Debtors clerk | *Referencing and distributing all incoming mail, agendas and minutes. *Control all printing orders by submitting requests to Finance Department, receive requisitions and send to printing and follow-up to ensure printing received in time. | Std 10 or equivalent |
| | Help Desk Clerk | Keep records of the section. Compile statistics of the section. Maintain document management system. Respond to telephone and oral enquiries from staff and management. Attend to customer's queries and refer to relevant officers. Keep record of enquiries and responses. Disseminate information within own scope of operation. Arrange venues for meetings and workshops for the section. Make logistical arrangements and inform stakeholders. Compile completion reports for submission the finance. Take minutes at sectional meetings. | Senior Certificate and background in Communication |
| | Senior Clerk: Rates & Service Fees | Processing property rates clearances. Answering account-related enquiries with regard to property rates, sewerage and refuse removal. | Grade 12 Certificate (Senior Certificate) |
| | Cashier | | Grade 12 |
| | Clerical Assistant | Performing various registration and administrative functions Delivering of departmental mail Ordering and serving tea and coffee Sending fax copies Making plan copies and photocopies | Grade 10 (Std 8/Junior Certificate) |
| | | | |
| Internal Auditing | | | |
| | Accountant: Internal Control | Investigating internal control procedures Compiling internal controls Assisting with the implementation of internal control procedures Carrying out inspections from time to time in order to ensure that control procedures are implemented and applied Compiling and maintaining instruction manuals Assisting with the vehicle cost section when required Assisting with other related issues when required | B degree with approximately four years' relevant experience OR Diploma in internal Auditing or B Comm with auditing |
| | Junior Internal Auditor | Examine cash transactions and records to establish adherence to laid down procedures. Conduct surprise cash counts. Verify and confirm bank balances. Conduct tests of cash receipts and disbursements against supporting documents. Compare supporting records with asset register and physical assets. Ascertain that additions and retirement of assets are duly recorded. Establish if assets are depreciated according to municipal policies. Verify ownership and existence of plant and assets. Examine payroll procedures and labour expenses and study internal controls thereon. Track all accounts payable and receivable to financial statements. | Senior certificate with Accounting as a subject |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|---------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| | | Report any violations of policies and procedures. Establish if financial reports are based on proper accounts and records. Establish whether projects are initiated, recorded and accounted for properly. Establish if municipal programs lead to efficiency and effectiveness. Establish if budgets and reporting requirements are adhered to. | |
| | | | |
| Tender and contract management | | | |
| | Manager: Supply Chain Management | <ul style="list-style-type: none"> *Formulate efficient tendering policies, procedures and processes that the municipality may use including tender quotations, auctions, and other types of competitive bidding procedures *Set up the tendering commission in line with the supply chain management policies as well as the municipal ordinances. *Establish bidding processes which only pre-qualifies persons that may participate *Prepare bid documentations, advertisement methods and invitations for contractors *Establish mechanisms and procedures for opening of accounts, registration and recording of bids in the presence of interested parties *Implement supply chain management system and ensure that valid data is captured daily. *Ensure that provisions are discussed and addresses with the CFO *Ensure that all staff within the revenue department has set Key Performance Areas (KPA) and their performance is monitored monthly *Ensures that staff has set career development and succession plan is set in consultation with Human Resources Department. *Ensures that under performances are addressed and disciplinary action taken where required *Ensure that tenders are properly reviewed in line with management processes *Reconciliation tender versus reality completed and learning points passed onto all stakeholders *Advise management on any macro/environmental changes that will impact on the department | B Comm degree |
| | Senior Manager: Budget | <p>1. BUDGET MANAGEMENT</p> <p>Ensure implementation of risk identification and management policies for the Budget and special projects sections, by supervising the management and Implementation of the following key performance indicators:</p> <ul style="list-style-type: none"> *Budget policies, procedures, systems and controls *Communication of policies *Report <p>2. REPORTING</p> <p>Ensure compliance to Corporate Governance within Budget and Supply Chain Management Division, by Supervising the Management and implementation of Internal and External Audit</p> <p>3. SUPPLY CHAIN MANAGEMENT</p> <p>Ensure the implementation of Supply Chain Management policies, procedures and systems in line with the procurement policy framework Act 2000 and BEE Act 2003, by Supervising the management: and implementation of the following key performance indicators:</p> <ul style="list-style-type: none"> *Policies, procedures and systems *Supply Chain management unit/committee *Training and development of staff on supply chain management *State Asset management *Compliance to ethical standards <p>4. MANAGEMENT OF STAFF</p> | NQF 5 level in accounting/financial management, B.COMM Honours |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Ensure that the Budget and Supply chain management: by division has high performing teams by Supervising the management and implementation of the following key performance indicators *KPAs *Discipline *Morale *Manage disputes | |
| Department: Technical / Civil Services | | | |
| | Director: Technical/ Civil Services | Senior management functions Serve on IDP Steering Committee by: · Providing relevant technical, sector and financial information for analysis for determining priority issues; · Contributing technical expertise in the consideration and finalisation of strategies and identification of projects; · Providing departmental operational and capital budgetary information; · Being responsible for the preparation of project proposals, the integration of projects and sector programmes, and · Being responsible for preparing amendments to the Draft IDP for submission to the municipal council for approval and to the MEC for Local Government for alignment. | Tertiary Qualification (field not stated). Required skills: Leadership, managerial, knowledge of local government, strategic thinking, decision-making, financial and planning |
| | Civil (Municipal Service) Design Engineer | Broad spectrum of Civil Engineering. Ability to deal with municipal services for local and regional authorities | BSc Civils; Pr. Eng |
| Water Services Authority (Water & Sanitation) | | | |
| | Manager: Water Services Authority | Controls the staff and activities of the Division Prepares reports to the relevant Council committees Prepares capital and revenue estimates for the Division Develops policies and bylaws Plans and develops Infrastructure Administers Services | B.Sc. (Civil Engineering) |
| | Planning Engineer | *Plan and design sanitation infrastructure within the Region. *Provide professional technical advice on design matters pertaining to water reticulation and distribution. | Bachelor Degree in Civil Engineering |
| | Technical Officer – Water Supplies | Management and monitoring of all water treatment plants and abstraction points Management and monitoring of surface ground water resources Preparation of water statistics Designing and planning of water infrastructure Preparation of tender documents and the management of various water projects | A Diploma or Degree in Civil Engineering |
| | Technician – Water Resources Planning | Provision of a support service to the Manager: Water Services Authority in the performing of planning functions as required by the Water Services Act and related legislation Preparation and updating of water related policy and by-laws Development of the Water Services Development Plan Ensure that projects are implemented in accordance with the Municipality's IDP, WSDP and | Diploma or Degree in Civil Engineering |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|-------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| | | approved schedules Assistance with public consultation on policy, tariffs, planning and service delivery Liaison with various stakeholders in the planning of strategies to ensure compliance with legislation. | |
| | Senior Technician Treatment | Management of the Wastewater Treatment processes Development of the Wastewater Treatment processes Management of staff, equipment and co-ordination of treatment operations Administration of wastewater treatment related engineering contracts Ensures the efficient operation and maintenance of the Wastewater Treatment Plant Provision of healthy and safe working environment for the Wastewater Treatment Plants Financial management and control | M+4 qualification (Civil or Water Care Works i.e. T4/BTech) with a focus on domestic and or Industrial Wastewater Process Engineering |
| | Connection Inspector | Duties Include: *Liaison with customers - identify property and check if mains exist in the area. Inspection of properties to ascertain whether private standpipes comply with Water Bylaws. *Verify the location, size and type of each water main for each water supply application. | Secondary education |
| | Technician – Information Management | Attends to sewer complaints Delegates work to subordinates Processes Town Planning proposals Carries out designs of sewer networks and pump stations | National Diploma in Civil Engineering or equivalent NQF qualification |
| | Senior Artisan | Construction of new works Repairs to existing structures and facilities Clearing of chokes and undertaking preventative maintenance Laying and maintenance of new and existing sewer mains and pipe bridges | Apprenticeship in bricklaying |
| | Waste Management | *Public relations service to existing customers and pro-active in securing new customers. *Work with the Operations Branch in securing new customers with reference the type and level of service required. *Administer complete information system with all contracts. *Work closely with the other Waste management staff to ensure uniformity of approach to account management. | Secondary education |
| Roads & Stormwater | | | |
| | Programme manager: Roads & Stormwater | Controls the staff and activities of the Division Prepares reports to the relevant Council committees Prepares capital and revenue estimates for the Division Develops policies and bylaws Plans and develops Infrastructure Administers Services | B.Sc. (Civil Engineering) |
| | Engineer | *Plan and design W&S infrastructure. *Provide professional technical advice on design matters. | Bachelor Degree in Civil Engineering |
| | Civil Technician | Management and supervision of construction activities | ND Civil Engineering |
| | Superintendent: Roads & Stormwater | Road construction and stormwater systems, including supervision, maintenance and administrative functions | Senior Certificate (Grade 12) with 2 years' experience of road construction and stormwater systems |
| | Foreman: Roads & Stormwater | Road construction and stormwater systems, including supervision, maintenance and administrative functions | Three years' relevant experience of road construction and stormwater |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|----------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | systems |
| Public Transport | | | |
| | Programme Manager: Public Transport Services | Controls the staff and activities of the Division Prepares reports to the relevant Council committees Prepares capital and revenue estimates for the Division Develops Public transport policy Plans and develops Public Transport Services and Infrastructure Administers Public Transport Services and promotes Public Transport Liaises with Public Transport operators Manages the City Bus operations | B.Sc. (Civil, Transportation or Mechanical) Engineering OR B. Degree in Transport Economics |
| | Planning Engineer | *Plan and design transport infrastructure. *Provide professional technical advice on design matters. | Bachelor Degree in Civil or Transport Engineering |
| | Chief Technical Officer: Transport Planning | Management of transport projects implemented by Amathole District Municipality/ Local Municipalities (reports to Senior Personnel); supervision of subordinates; payment processing; approval of designs and project details; problem solving in projects implemented; ensuring that Post Construction Operation arrangements are in place and rendering support to Local Municipalities | B Tech/ T4/ S4/ T3 in Civil Engineering; relevant professional registration with Engineering Council of South Africa [ECSA]; a minimum 3 years post qualification experience in Project Management, Site supervision and Transport |
| Electrical Services | | | |
| | Programme manager: Electrical Services | Controls the staff and activities of the Division Prepares reports to the relevant Council committees Prepares capital and revenue estimates for the Division Develops policies and bylaws Plans and develops Infrastructure Administers Services | B.Sc. (Civil or Electrical Engineering) |
| | Head of System Operations | Report to the Director: Electrical Engineering Services. | BSc. or BTech degree, as well as a Certificate of Competence as Electrical Engineer and registration with the ECSA as Professional Engineer |
| | Planning Engineer | *Plan and design MV and LV electrical infrastructure within the Region. *Provide professional technical advice on design matter pertaining to electrical reticulation and distribution. | Bachelor Degree in Electrical Engineering |
| | Chief Protection Engineer | Effective design, planning and analysis of all protection systems. | B.Sc (Eng) (Electrical) |
| | Technician | Carrying out fault location and analyses on equipment failure on all aspects of the distribution network (LV and MV). Performing network disturbance tests by installing relevant test instruments. Collating fault statistics on LV and MV networks and recommending remedial action. Planning and preparing replacement projects with the Superintendent for networks with repetitive disturbances. Assisting the Superintendent in preparing Capital and Operating Budget items. | National Diploma in Electrical Engineering |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|--------------------------------------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| | | Performing administrative duties. | |
| | Superintendent (Electrical) | *Manage staff and associated contractors carrying out the maintenance and construction work including overhead lines, substations, cables and street lighting *Acceptance testing of work carried out via Consultants. | recognised apprenticeship as an Electrician |
| | Transmission Control Officer | Direct and control all switching operations on the Electricity Transmission System | Qualified electrician |
| | Apprentice (Electrician) | Incumbent to be trained as Artisan (Electrician). | secondary education with Mathematics, Science, and one official language |
| Building Inspection, Operations and Maintenance | | | |
| | Maintenance Officer | *Attending to emergency and routine building maintenance and repairs at Health Department HQ Building. Ensure compliance with the requirements of the Machinery and Occupational Safety Act and Regulations, attend Safety Committee Meetings and supervise the activities of safety representative. | Secondary education |
| | Areas Superintendent | *Monitors work of subordinates and department and ensures that all work is carried out efficiently, effectively and safely. *Maintenance of water mains. *Investigates and maintains records of private jobbing done by field staff. *Arranges for heavy earthworks plant for certain jobs when required and authorises forms. | Artisan / plumber |
| | Head Building Inspector | Supervise Building Inspectors Make sure that in the area as indicated the building inspections are done in accordance with the 0400 National Building Regulations Be responsible for a part of the town and also do inspections Make sure that illegal structures are addressed and followed up Assisting the building inspectors with larger projects and low cost housing | T1/S1/N4 in Building and Structural Surveying OR Quantity Surveying OR Building and Structural Construction OR Architecture |
| | Building Inspector | Inspections of excavations for foundations, floors, sewerage etc. Monitoring all building work and notices Follow-up of illegal building work Dealing with general enquiries in respect of foundations, floors etc. | N3 or a relevant qualification Registration as Law enforcement officer |
| GIS Services | | | |
| | GIS technician | *Prepares drawings for data capturing. *Maintains the GIS database of records for the department. *Carries out Spatial query and analysis of the GIS database. *Performance of administrative and miscellaneous functions for the GIS division. | Secondary education with Mathematics as subject |
| Stores and purchasing | | | |
| | Stores Controller and Buyer | Exercise quantity control over stock and material purchased for municipal use. Supervise municipal stores and material administration. Control over stores keeping. Implement the Councils Procurement Policy. See to the requirements of Occupational Health and Safety Standards. Oversee all purchases and preparation for supplier payments. | Diploma in Purchasing and Stock Control |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|-------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Department: Strategic and Development Planning | | | |
| | Director: Strategic and Development Planning | <ul style="list-style-type: none"> * Senior management functions * Fulfil role of IDP Manager during compilation/ review of IDP, i.e.: <ul style="list-style-type: none"> • Prepare monitor and evaluate progress in terms of the Process Plan; • Undertake the overall management and co-ordination of the planning process; • Ensure that all relevant actors are appropriately involved; • Ensure that the time frames are being adhered to; • Nominate persons in charge of different roles; • Be responsible for the day-to-day management of the drafting process; • Ensure that planning process is participatory, strategic and implementation oriented and is aligned and satisfy sector planning requirements; • Respond to comments on the draft IDP from the public, horizontal alignment and other spheres of government to the satisfaction of the municipal council; • Ensure proper documentation of the results of the planning of the IDP document; and • Adjust the IDP in accordance with the MEC for Local Government's proposal. | Tertiary Qualification (field not stated). Required skills: Leadership, managerial, knowledge of local government, strategic thinking, decision-making, financial and understanding of integrated development planning process |
| Town Planning | | | |
| | Senior planner | Managing internal & external funded projects on Planning & Survey including Restitution; administering the implementation of projects; monitoring implementation of projects; assisting in the development, updating & administering the Land Reform & Settlement Plan; assisting in the management & implementation of the District Spatial Development Framework; attending to any related Town Planning/ Land Use Change processes; report writing. | 3-year tertiary academic qualification preferably in Town Planning or Developmental studies or Administration studies |
| | Principal Town Planning Technician | <ul style="list-style-type: none"> *Undertake statutory development applications. *Manage the preparation of base plans and conceptual plans for subdivisional layouts, structure plans, precinct plans, land use plans, development plans and development applications. *Undertaking assigned tasks related to strategic and development planning, the evaluation of development proposals, community and advocacy planning, project management and research and policy development. | Diploma in town and regional planning |
| | Branch Head: Land Information | Creates and maintains City Mapping Compiles and maintains Land Information data Conducts consultations Manages branch staff | BSc Land Surveying/Geomatics/Town Planning/Engineering/Geography |
| | Senior Technician - Survey | Undertakes topographic and aerial surveys Assists in cadastral surveys and preparation of survey records Maintains survey equipment Trains survey hands Controls survey parking garage and storeroom | National Diploma in Surveying (3 years) |
| | Senior Valuer | Maintain present Valuation Roll by doing interim and supplementary valuation Take care of the Municipality's day-to-day valuation needs regarding: * Acquisition of land | National Diploma/equivalent degree in Property Valuation |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|---------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <ul style="list-style-type: none"> * Disposal of Municipal owned land * Letting of Municipal property * Get familiar with Municipal Valuation Office practice. | |
| | | | |
| Local Economic Development | | | |
| | Senior Administration Officer: Economic Development & Tourism | Maintain policies and procedures for Economic development division. Ensure adequate administrative support for economic development activities. Co-ordinate the activities relating to tourism. Make logistical / arrangements for economic development activities. Maintain policies and procedures relating to marketing activities. Provide administrative support for marketing activities. Co-ordinate administrative activities relating to tourism. Co-ordinate budget for economic development and tourism. Compile reports required of the division. Provide secretariat services for division. Promote municipality locally, nationally and internationally. Perform logistical arrangements for planning and development. Ensure supply of operational requirements for economic development, tourism and marketing. | Degree / Diploma in Development Studies or relevant qualifications |
| | LED Coordinator | Manage LED projects | Degree in Public Administration or National Certificate: Local Economic Development (NQF Level 5-6) |
| | LED Officer | Implement LED projects | National Certificate: Local Economic Development (NQF Level 4) |
| | Community liaison officer/Community Development Worker/Officer | Ensure involvement of the local communities in LED projects | National Certificate: Public Relations |
| Department: Community Services | | | |
| | Director: Community Services | Senior management functions Serve on IDP Steering Committee by: <ul style="list-style-type: none"> · Providing relevant technical, sector and financial information for analysis for determining priority issues; · Contributing technical expertise in the consideration and finalisation of strategies and identification of projects; · Providing departmental operational and capital budgetary information; · Being responsible for the preparation of project proposals, the integration of projects and sector programmes, and · Being responsible for preparing amendments to the Draft IDP for submission to the municipal council for approval and to the MEC for Local Government for alignment. | Tertiary Qualification (field not stated). Required skills: Leadership, managerial, knowledge of local government, strategic thinking, decision-making, financial and planning |
| | Deputy Manager: Community Services | Assist in management of department | Tertiary qualification in development-related field |
| Health Services | | | |
| | Environmental Health Officers | Assess impact of the environment on communities and human health | National Diploma in Hygiene and Cleaning Management National Diploma in Environmental |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| | | | Health |
| | Professional Nurse (Primary Health Care) | Rendering of comprehensive Primary Health Care services | registration with SANC as a General Nurse, Midwife and Community Health Nurse are essential |
| | Enrolled Nurse (Primary Health Care) | Providing assistance to Professional Nurse in rendering of comprehensive Primary Health Care | with South African Nursing Council as an enrolled Nurse; 2 years of training in an accredited nursing college |
| Refuse Removal | | | |
| | Area Cleansing Officer | *Ensuring that the street sweeping and refuse collection function in his/her area is effectively carried out to the required standards. *Controlling budget. Liaising with the public. * Accept appointment as a Peace Officer.*Plan and schedule the removal of informal shacks where requested. *Maintaining an up-to-date database of all clients in his area in respect of refuse removal and be proactive in retaining and acquiring new clients. | Matric/Grade 12 or equivalent. |
| | Driver/ Supervisor | *Provide a safe and efficient waste removal driving service. *Supervision of staff. *Attends to driving functions by driving specialized refuse removal vehicles. *Administrative duties. *Attend to complaints, safety matters. *Deputises for Cleansing Officer. | Secondary education |
| Environment and Recreational Management | | | |
| | Cemeteries: Manager | | |
| | Cemeteries: Contract manager | | |
| | Parks and Open Spaces | | |
| | Sport and Recreation | | |
| | Plantations and Farms | | |
| | Nursery, Beautification and Street Trees | | |
| Housing | | | |
| | Head: Housing Services | Operational, financial and personnel management of the Housing Services Division , report to the Director: Community Services | Tertiary qualification in Housing Management (Housing Policy and Development Program) |
| | Manager: Social Housing | *Manage social housing department by providing leadership and direction to social housing initiatives through policy formulation, strategic planning and ensuring overall objectives are met. *Managing Human Resources. | Tertiary qualification in development-related field |
| Library Services | | | |
| | Librarian | | Diploma or B. Bibl. Degree in Library & Information science. |
| Traffic Services | | | |
| | Traffic Officer | | Traffic officer Diploma |

CAPACITY NEEDS FOR THE WATER SECTOR

| | Position | Functions | Required qualifications |
|-------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| | Assistant Superintendent: Traffic Law Enforcement | | Senior Certificate (Grade 12) plus Basic Traffic Diploma and final diploma of the ITO |
| | Clerk Grade I: Motor Vehicle Registrations | | Senior Certificate (Grade 12) plus three years' relevant experience |
| | Superintendent: Driver's And Learners License | | Senior Certificate (Grade 12) plus Basic Traffic Diploma and final diploma of the ITO or Relevant Accredited Qualifications |
| | Licensing: Examiners | | Examiners for Driving & Licence Diploma |
| | Chief Protection Engineer | Effective design, planning and analysis of all protection systems. | B.Sc (Eng) (Electrical) |
| Disaster Management / Emergency Services | | | |
| | Platoon Commander: Operations | Overseeing of a Fire Sub-Station; responding to emergency incidents; in charge of vehicles & crews; conducting public tours & lectures; conducting staff training regarding fire & rescue techniques; compilation of required reports pertaining to platoon activities and the supervision of Fire Fighters | Fire Fighter II certificate ; Basic Ambulance Course |
| | Fire fighters | | Senior Certificate (Gr. 12) |
| | Coordinator Emergency Relief: Disaster Management | Implement and maintain policies and procedures on emergency relief. Co-ordinate and conduct education and awareness of emergency relief. Co-ordinate the provision of emergency relief and reconstruction. Co-ordinate the establishment of emergency relief structures and support services. Liaise with relevant structures to secure emergency relief. Liaise with communities for distribution of resources and services. Liaise with business community to secure support for emergency relief. Co-ordinate and conduct education and awareness on emergency relief. Compile required proposals, budget and reports on emergency. Updating of all relevant information regarding emergency situations and risk analysis. Updating of emergency and response plans for institutions. Administer emergency preparedness of Disaster Management. Identify vulnerabilities and risk that pose threat to the functional operation of Disaster Management. Maintain and update the existing disaster management infrastructure. Evaluate disaster management processes and problem areas regarding functional implementation of the disaster management function. | Diploma/Certificate in Disaster Management |
| | Radio Communication Operator; Disaster Management | Receive notices of disaster emergency. Maintain record of reports received. Relay messages of disaster and emergency to operational staff. Submit reported incidences to superior. Keep statistics of disaster reports. Receive individual s coming to report incidents. Maintain register of individual and reported incidents. Give front line assistance to people stricken by disaster. Relay individual s to relevant authorities. Ensure that telephone radio and communication systems are functional. Report any operational faults to supervisor. Ensure cleanliness and orderliness in call center. Report and take steps to rectify faults in the call center. Responsible for the command vehicle. | Diploma/ Certificate in Telephone/ Radio Communication |

10.4 APPENDIX 4: MATRIX OF SKILLS REQUIREMENTS

ASSESSMENT OF TRAINING PROGRAMMES AND CAPACITY NEEDS FOR THE WATER SECTOR

Skills Requirements for WSAs and WSPs

Geraldine Schoeman

AFROSEARCH

Development Consultants

P O Box 13540

Hatfield

0028

South Africa

(012) 362 2908

gera@afrosearch.co.za

10.4.2 Skills required per occupational category in Water Services Authorities

Table 19: Required skills and qualifications per occupational category in water services authorities

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Leadership and governance | | | | | |
| Mayor & Executive Mayor | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge of code of conduct Knowledge management skills Computer skills Professional communication skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Strategic decision-making skills General understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Advanced leadership skills Legislative & contextual knowledge Conflict resolution skills Negotiation skills Political skills Sector-specific application of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to preside at Meetings of the Executive Committee Ability to perform ceremonial functions Ability to perform duties and exercise powers assigned to Mayor Ability to provide political leadership to municipality Ability to promote developmental local government agenda in municipality | No minimum qualification requirement |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Councillors | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Decision-making skills Report writing skills Career planning General understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Leadership skills Community facilitation skills Legislative & contextual knowledge Conflict resolution skills Political skills Understanding of Code of Conduct Sector-specific application of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to represent interests of the public at Council meetings Ability to propose and evaluate municipal bylaws Ability to participate in strategic and political decision-making Familiarity with new finance management systems (e.g. GAMAP and GAAP) Understanding of technical and financial implications of political decisions | No minimum qualification requirement |
| Ward Committee Members | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Report writing skills Career planning General understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Community facilitation skills Legislative & contextual knowledge Conflict resolution skills Political skills Understanding of Code of Conduct Sector-specific application of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to represent interests of the public at Council meetings Ability to participate in strategic and political decision-making Understanding of technical and financial implications of political decisions | No minimum qualification requirement |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Chairperson | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Report writing skills Career planning | Legislative & contextual knowledge Knowledge of meeting procedures Understanding of Code of Conduct | Ability to convene and lead Council meetings Ability to ensure compliance to Code of Conduct | No minimum qualification requirement |
| Senior officials and managers | | | | | |
| Municipal manager | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills Community awareness People management skills Budgeting Financial management and planning skills Problem solving and analytical skills Strategic decision-making skills Report writing skills Monitoring and evaluation General understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Advanced leadership skills Knowledge of local government context and relevant legislation Conflict resolution skills Negotiation skills Understanding of funding mechanisms, e.g. the equity transfer scheme Sector-specific application of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to provide strategic direction for Council Ability to promote Local Economic Development in municipal area Ability to work in collaboration with political leadership of municipality Ability to implement new finance management systems (e.g. GAMAP and GAAP) Ability to perform duties as outlined in Municipal Systems Act Section 55(1) | Tertiary Qualification (pref. Public Administration) |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Directors | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills People management skills Change management skills Budgeting, financial management, planning skills Project management skills Problem solving and analytical skills Strategic decision-making skills Report writing skills Monitoring and evaluation General understanding of LED, Gender mainstreaming, Batho Pele, Cooperative governance, Stakeholder participation | Leadership skills Knowledge of local government context and relevant legislation Conflict resolution skills Diversity management skills Negotiation skills Knowledge of integrated development planning Contract management skills Understanding of funding mechanisms, e.g. the equity transfer scheme Sector-specific application of LED, Gender mainstreaming, Batho Pele, Cooperative governance, Stakeholder participation | Ability to provide strategic and administrative guidance to departments Ability to participate in Integrated Development Planning process Ability to incorporate technical considerations into strategic plans Ability to integrate projects/ sector programmes Ability to prepare and evaluate project proposals Ability to implement new finance management systems (e.g. GAMAP and GAAP) Ability to prioritise issues in planning and decision-making | Tertiary qualification in field relevant to departmental function |
| Corporate services/ Core administration | | | | | |
| Professionals | | | | | |
| HR and Corporate Services managers | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills People management skills Budgeting Problem solving and analytical skills Strategic thinking Report writing skills | Human resources management skills Leadership skills Knowledge of local government context and relevant legislation Strategic planning and decision-making skills Conflict resolution skills Diversity management skills Change management skills Monitoring and evaluation skills | Ability to manage and oversee day-to-day operation of Human Resources and Corporate Services departments Ability to support large-scale implementation of ICT systems for electronic information management Ability to oversee development and management of institutional performance/ M&E systems Ability to ensure that career development and succession plans are in place | Tertiary qualification in HR or Public Administration field |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Legal Officer | English language proficiency (speaking, reading and writing) Listening skills Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills | Knowledge management skills Computer skills Professional communication skills People management skills Problem solving and analytical skills Report writing skills | Research skills Knowledge of local government context and relevant legislation Knowledge of South African labour and mercantile law Negotiation skills | Ability to provide legal and administrative guidance to municipal management Ability to provide support service regarding disciplinary processes Ability to represent municipality at CCMA and Bargaining Council | LLB or equivalent |
| HR Officer | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Interpersonal/ social skills Acceptance of diversity Time management skills Life skills Teamwork | Administrative skills Knowledge management skills Computer skills Advanced communication skills People management skills Knowledge of HR field and discipline Familiarity with corporate environment Problem solving and analytical skills Report writing skills Understanding of Batho Pele Principles | Familiarity with information systems Knowledge of local government context and relevant legislation/ regulations Knowledge of HR and Administration corporate policies and systems Dispute resolution and negotiation skills | Ability to oversee implementation of HR processes and strategies Ability to advise on HR and administrative decisions Ability to consult with line management and provide guidance in the application of Corporate HR and administration policies/ procedures Ability to provide guidance to line management on staff education, training & development; staff recruitment & selection; labour relations; occupational health & safety (OHS); and organisational transformation | Bachelor's degree or National Diploma in Human Resources or Labour Relations |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Skills Development Facilitator | English language proficiency (speaking, reading and writing) Ability to learn Emotional intelligence Integrity/ honesty Interpersonal/ social skills Acceptance of diversity Time management skills Life skills Teamwork | Administrative skills Knowledge management skills Computer skills Advanced communication skills Knowledge of HR field and discipline Familiarity with corporate environment Basic report writing skills | Familiarity with information systems Knowledge of HR and Administration corporate policies, systems and procedures Knowledge of legislation/ policies relevant to skills development and training (SD&T) Ability to conduct skills audits and needs analyses Ability to consult with training committees and line managers Ability to liaise with training service providers | Ability to identify skills needs in an organisation (by means of needs analyses, skills audits, etc.) Ability to compile Workplace Skills Plans Ability to access and implement training courses Ability to monitor and evaluate training | Degree in Public Administration |
| Technicians/ Associated professionals | | | | | |
| Performance Management Administrator | English language proficiency (speaking, reading and writing) Ability to learn Emotional intelligence Integrity/ honesty Interpersonal/ social skills Acceptance of diversity Time management skills Life skills Teamwork | Administrative skills Knowledge management skills Computer skills Advanced communication skills Knowledge of HR field and discipline Familiarity with corporate environment Basic report writing skills | Familiarity with information systems Knowledge of HR and Administration corporate policies, systems and procedures Ability to provide administrative support to HR officers and management | Ability to implement and maintain performance management systems Ability to consult with line management regarding staff performance and key performance indicators (KPIs) Ability to assess staff performance against KPIs | National Diploma in Human Resources |
| Manager: Corporate Safety | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Administrative skills Knowledge management skills Computer skills Communication skills Knowledge of occupational health & safety principles Familiarity with corporate environment Basic report writing skills | Knowledge of legislation relevant to OHS legislation and corporate policies Familiarity with required content and underlying principles of corporate OHS programmes | Ability to develop and coordinate implementation of OHS programme for municipality Ability to advise municipal management on actions necessary to maintain safety standards Ability to formulate safety rules and regulations Ability to update safety manuals for each municipal departments | Recognized three year diploma/degree in field related to OHS |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Occupational Health and Safety Officer | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills | Administrative skills Knowledge management skills Computer skills Communication skills Knowledge of occupational health & safety principles Familiarity with corporate environment Basic report writing skills | Knowledge of legislation relevant to OHS legislation and corporate policies Familiarity with required content and underlying principles of corporate OHS programmes Familiarity with safety rules and regulation of municipality | Ability to investigate accidents and inspect safety of work Ability to check on availability, condition and use of safety appliances Ability to support Safety Manager in ensuring compliance with OHS legislation and policies | National Diploma - Safety Management (NAD-SAM) |
| Information & Communications Technology Specialist | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills | Computer skills Familiarity with corporate information and communication systems | Hardware installation and maintenance skills Software installation and maintenance skills Computer operating skills Programming skills | Ability to install and maintain computer based information systems and software Ability to assist users of micro-computers and standard software packages Ability to control and operate computers and peripheral equipment Ability to carry out relevant programming tasks | Computer operator/ programming course |
| Clerks | | | | | |
| Administrative secretaries/ Personal assistants | English language proficiency (speaking, reading and writing) Ability to learn Emotional intelligence Integrity/ honesty Time management skills Life skills Teamwork | Administrative skills Organisational skills Computer skills Communication skills Familiarity with corporate environment Awareness of protocol Customer service & telephone skills | Familiarity with office and administrative systems in municipal environment Secretarial skills | Ability to plan efficient and effective office secretarial system Ability to provide secretarial services Ability to organise and coordinate services Ability to arrange meetings, workshops, etc. | Grade 12 and a 3-year secretarial diploma |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Administration Clerk: Human Resources | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Time management skills Life skills Teamwork | Administrative skills Organisational skills Computer skills Basic statistical knowledge Familiarity with corporate environment Awareness of protocol Customer service & telephone skills | Typing skills Record-keeping skills Administrative skills related to office and information management Secretarial skills | Ability to type documents and make copies Ability to compile and update records on personnel and payroll matters Ability to compile statistics on personnel matters Ability to respond to enquiries and refer to relevant officers Ability to keep records of enquiries and responses Ability to assist in responding to applications | Grade 12 with typing skills & computer literacy |
| Office Assistants | English language proficiency (speaking and reading) Ability to learn Emotional intelligence Integrity/ honesty Time management skills Life skills Teamwork | Administrative skills Organisational skills Computer skills Familiarity with corporate environment Awareness of protocol Customer service & telephone skills | Administrative skills related to office management | Ability to collect and deliver files and documents between departments Ability to provide counter services | Secondary education |
| Elementary occupations | | | | | |
| Clerical Assistant | English language proficiency (speaking, and reading) Ability to learn Emotional intelligence Integrity/ honesty Time management skills Life skills Teamwork | Administrative skills Organisational skills Awareness of protocol Customer service & telephone skills Driving skills | Administrative skills related to office management | Ability to collect and deliver files and documents between departments Ability to provide counter services Sending/ receiving faxes, making photocopies, etc. | Grade 10 (Std 8/Junior Certificate) |
| Core finance | | | | | |
| Professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Finance manager | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Computer skills Professional communication skills Community awareness Customer service skills People management skills Budgeting Financial management skills Problem solving and analytical skills Strategic decision-making and prioritisation skills Report writing skills Ability to formulate financial statements | Leadership skills Knowledge of local government context and relevant legislation Understanding of new finance management systems (e.g. GAMAP and GAAP) Negotiation skills Knowledge of integrated development planning Skills to integrate budgets, IDPs and operational plans Understanding of funding mechanisms, e.g. equity transfer scheme Ability to ring-fence water services revenue and expenditure Allocating equitable share and other subsidies within water services budget | Ability to ensure compliance with financial legislation Ability to oversee implementation of new finance management systems (e.g. GAMAP and GAAP) Ability to manage operating and capital budgets and annual financial statements Ability to budget for multi-year capital projects and manage linked recurrent cost implications | B Comm. or equivalent with accounting and administration |
| Accountant | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Accounting and bookkeeping skills Budgeting Financial management and administration skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of new finance management systems (e.g. GAMAP and GAAP) Understanding of funding mechanisms, e.g. equity transfer scheme Ability to operate electronic financial systems Ability to capture data electronically | Ability to assist with implementation of GAMAP and Budget Reforms Ability to develop statistical reporting modules Ability to develop financial policies and procedures | B.Comm. Degree with Accounting I, II and III as subjects |
| Financial Officer - Budget | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Budgeting Management and supervision skills Financial management and administration skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of new finance management systems (e.g. GAMAP and GAAP) Ability to operate electronic financial systems Ability to capture data electronically | Ability to coordinate and compile Draft Estimate Report in accordance with Municipal Finance Management Act Ability to compile and publish budgets | B Com or CA (SA), Associate member of CIS or equivalent accounting qualification (M+3) |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Financial Officer - Capital | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Budgeting Management and supervision skills Financial management and administration skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of new finance management systems (e.g. GAMAP and GAAP) Ability to operate electronic financial systems Ability to capture data electronically | Ability to render accounting service regarding Capital Budgeting Ability to monitor capital expenditure Ability to maintain asset register | B Com or CA (SA), Associate member of CIS or equivalent accounting qualification (M+3) |
| Financial Officer - Financial Statements | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Budgeting Financial management and administration skills Management and supervision skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of new finance management systems (e.g. GAMAP and GAAP) Understanding of funding mechanisms, e.g. equity transfer scheme Ability to operate electronic financial systems Ability to capture data electronically | Ensuring that municipality meets tax-related obligations Ability to ensure correct receipt, allocation and distribution of levies and equitable share | B. Com or CA; Postgraduate qualification in taxation |
| Accountant: Internal Control | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Accounting and bookkeeping skills Financial management and administration skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of new finance management systems (e.g. GAMAP and GAAP) Understanding of funding mechanisms, e.g. equity transfer scheme Ability to operate electronic financial systems Ability to capture data electronically | Ability to develop, evaluate, implement and review internal control procedures Ability to monitor application of control procedures Ability to compile and maintain instruction manuals | Diploma in internal auditing or B Comm with auditing |
| Technicians/Associated professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Junior Internal Auditor | English language proficiency (speaking and reading) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Accounting and bookkeeping skills Financial management and administration skills Problem solving skills Ability to read financial statements | Understanding of new finance management systems (e.g. GAMAP and GAAP) Familiarity with municipality's financial systems and procedures Familiarity with municipality's budgets and reporting requirements Ability to operate electronic financial systems Ability to capture data electronically | Ability to evaluate adherence to established procedures Ability to verify bank balances and validity of receipts and disbursements Ability to verify accuracy of asset register Ability to establish whether projects are initiated, recorded and accounted for Ability to evaluate financial efficiency of municipal programmes | Senior certificate with Accounting as a subject |
| Clerks | | | | | |
| Finance clerks | English language proficiency (speaking and reading) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Basic bookkeeping skills Problem solving skills | Familiarity with municipality's financial systems and procedures Ability to capture data electronically | Ability to control printing orders Ability to receive requisitions and send to printing Ability to follow up to ensure printing is received in time | Grade 12 |
| Client services | | | | | |
| Professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Communications Manager | English language proficiency (speaking, reading and writing) Ability to learn Emotional intelligence Interpersonal/ social skills Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Administrative skills Organisational and planning skills Budgeting skills Familiarity with corporate environment Knowledge of public sector Computer skills Communication skills Presentation skills Networking skills Customer service skills People management skills Problem solving and analytical skills Report writing skills | Corporate liaison skills Ability to source information Ability to communicate with stakeholders Sector-specific application of stakeholder participation Developing a communication strategy Contract management skills | Ability to develop, maintain and utilise channels of communication with stakeholders Ability to provide clients with advice and service Ability to set up and maintain service level agreements Ability to control communications budget | A diploma/degree in Marketing/Communications and/or Behavioural Sciences |
| Clerks | | | | | |
| Help desk clerks | English language proficiency (speaking and reading) Ability to learn Interpersonal skills Integrity/ honesty Acceptance of diversity Life skills Teamwork | Office administration skills Basic computer skills Communication skills Awareness of protocol Customer service skills Telephone skills | Ability to communicate with customers Ability to obtain and interpret information from billing system | Ability to maintain document management system Ability to respond to telephonic and oral enquiries from staff and management Ability to attend to customer's queries and refer to relevant officers Ability to keep record of enquiries and responses | Senior Certificate and background in Communication |
| Senior Clerk: Rates & Service Fees | English language proficiency (speaking and reading) Ability to learn Interpersonal skills Integrity/ honesty Acceptance of diversity Life skills Teamwork | Basic computer skills Communication skills Awareness of protocol Customer service skills Telephone skills | Ability to communicate with customers Ability to obtain and interpret information from billing system | Ability to process property rates clearances Ability to answer account-related enquiries | Grade 12 |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Cashier | English language proficiency (speaking and literacy) Interpersonal skills Integrity/ honesty Life skills Teamwork | Customer service skills Awareness of protocol | Ability to receive payments Ability to issue receipts | Ability to operate cash register | Grade 12 |
| Service workers | | | | | |
| Call centre operator | English language proficiency (speaking, reading and writing) Emotional intelligence and stress management skills Interpersonal skills Time management skills Life skills Teamwork | Customer service skills Public relations skills Awareness of protocol Computer skills Problem solving and analytical skills | Ability to operate trunk radio system, Zone Watch, telemetry, PABX and GIS system Monitoring skills | Ability to log and dispatch calls to relevant operational field staff Ability to monitor internal communications on trunk radio infrastructure Ability to monitor/ implement emergency procedures Ability to monitor trunk radio alarms and telemetry alarm systems for Water Services Ability to monitoring access control and security systems | Grade 12 |
| Department: Technical and Civil Services | | | | | |
| Professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Civil Design Engineer | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills | Leadership skills Computer skills Communication skills Dispute resolution and negotiation skills People management skills Community awareness Budgeting Financial management skills Planning and organisational skills Problem solving and analytical skills Monitoring and evaluation skills Report writing skills | Knowledge of Local Government-related legislation and policies Knowledge of municipal infrastructure operations and maintenance Knowledge of legislative procedures regarding consulting and contracting services Specialist contract management skills Skills to provide input in formulation of KPIs and career development and succession plans Understanding of LED, Gender mainstreaming, Batho Pele, Cooperative governance, Stakeholder participation | Ability to assess the feasibility and budgetary implications of projects Ability to incorporate opportunities for community-based public works programmes Ability to monitor performance of contractors Ability to negotiate corrective action against service level agreement objectives & targets Ability to ensure that career development and succession plans for personnel are in place | BSc Civils; Pr. Eng |
| Manager: Supply Chain Management | English language proficiency (speaking, reading and writing) Mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills | Leadership skills Administrative skills Organisational skills Project management skills Computer skills Professional communication skills Dispute resolution and negotiation skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Report writing skills | Knowledge of Local Government-related legislation and policies Knowledge of legislative procedures regarding consulting and contracting services Ability to prepare bid documentations and invitations for contractors Skills to implement supply chain management system Specialist contract management skills Understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to formulate tendering policies, procedures and processes Ability to set up tendering commission in line with the supply chain management policies and municipal ordinances Ability to ensure effective management of accounts and recording of bids Ability to oversee review of tenders | B Com degree |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Manager: Water Pollution Control | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills | Leadership skills Administrative skills Organisational and planning skills Project management skills Computer skills Professional communication skills Dispute resolution and negotiation skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Report writing skills | Knowledge of Local Government-related legislation and policies Technical knowledge of water resources management and pollution control Knowledge of legislative procedures regarding consulting and contracting services Understanding of: <ul style="list-style-type: none"> • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to manage the acquisition and maintenance of SABS 17025 accreditation Ability to coordinate ad hoc research and development projects related to effluent quality issues Billing of accounts for industrial effluent Ability to liaise with stakeholders concerning water pollution control/environmental matters/ standards/ legal matters Ability to oversee implementation of contingency plans during emergency situations. | Tertiary qualification in Chemical and Water Engineering/Chemistry |
| Water services authority (excl. water services provision) | | | | | |
| Professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Manager: Water Services Authority | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills | Leadership skills Administrative skills Organisational and planning skills Project management skills Computer skills Professional communication skills Dispute resolution and negotiation skills Community awareness People management skills Budgeting Financial management skills Problem solving and analytical skills Report writing skills | Knowledge of Local Government-related legislation and policies Technical knowledge of water and sanitation services infrastructure operations and maintenance Knowledge of legislative procedures regarding consulting and contracting services Understanding of demand-responsive approach to service delivery Specialist contract management skills Understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to deal with municipal water and sanitation services Ability to manage formulation of water services development plan (WDSP) Ability to assess the feasibility and budgetary implications of water and sanitation projects Ability to incorporate opportunities for community-based public works programmes Ability to promote a demand-responsive approach to service delivery Ability to monitor performance of contractors Ability to negotiate corrective action against service level agreement objectives and targets Ability to ensure that career development and succession plans for water and sanitation services personnel are in place | BSc degree or diploma in Civil Engineering |
| Water Demand Management Professional Officer | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Planning and project management skills Analytical skills and problem solving skills Organisational and planning skills Financial management skills Innovation Computer skills Communication skills Report writing skills Ability to understand issues of a technical and complex nature | Understanding of water and sanitation infrastructure in municipal area Knowledge of Local Government-related legislation and policies Knowledge of water and sanitation industry Knowledge of infrastructure planning Advanced computer literacy, including GIS, SAP and database skills Understanding of: • LED • Batho Pele • Cooperative governance | Ability to assist with compilation and maintenance of WSDP Assisting with water services tariff modelling (incl. data collection and analysis) Ability to perform water balance calculations and water audits | A first degree or diploma in Civil Engineering |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Technicians/Associated professionals | | | | | |
| Technician – Water Resources Planning | English language proficiency (speaking, reading and writing) Mathematical literacy Basic science knowledge Ability to learn Integrity/ honesty Time management skills Life skills | Administrative skills Organisational and planning skills Project management skills Computer skills Communication skills Community awareness Dispute resolution and negotiation skills Problem solving and analytical skills Report writing skills | Knowledge of Local Government-related legislation and policies Knowledge of water-related policies and bylaws Technical knowledge of water resources management and planning Knowledge of integrated development planning process Public consultation skills Understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to support WSA Manager in planning function Ability to prepare and update water-related policy and bylaws Ability to compile WSDP Ability to ensure implementation of projects in accordance with IDP, WSDP and approved schedules Ability to consult with public on policy, tariffs, planning and service delivery Ability to liaise with stakeholders in planning of strategies | Diploma or Degree in Civil Engineering |
| LED and integrated development planning | | | | | |
| Professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| IDP Manager | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Interpersonal/ social skills Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Administrative skills Organisational skills Networking and decision-making skills Problem-solving and strategic thinking People management skills Change management and diversity management skills Community facilitation skills Conflict resolution skills Communication skills Report writing skills | Understanding of IDP process Knowledge of Local Government-related legislation and policies Skills to share and disseminate knowledge and experience Skills to respond to specific local conditions Understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to prepare IDP Process Plan Ability to monitor and evaluate progress in terms of the Process Plan Ability to undertake overall management and coordination of planning process Ability to ensure involvement of relevant stakeholders Ability to respond to comments on draft IDP Ability to ensure accurate formulation of IDP document Ability to adjust IDP in accordance with MEC for Local Government's proposal | 3-year tertiary qualification in Town Planning, Developmental Studies or Public Administration |
| Town & Regional Planner | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Interpersonal/ social skills Integrity/ honesty Acceptance of diversity Time management skills Life skills | Administrative skills Organisational skills Networking and decision-making skills Problem-solving and strategic thinking People management skills Change management and diversity management skills Community facilitation skills Conflict resolution skills Communication skills Report writing skills | Technical knowledge of town and regional planning Understanding of IDP process Familiarity with Spatial Development Frameworks Knowledge of legislation and policies related to local government and land reform Understanding of funding mechanisms Understanding of land use change processes Understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to manage and administer implementation of projects on planning & survey, including restitution Ability to monitor implementation of projects Ability to assist in development, review and implementation of Land Reform & Settlement Plan Ability to assist in implementation of District Spatial Development Framework | 3-year tertiary qualification in Town Planning, Developmental Studies or Public Administration |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| LED Manager | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Interpersonal/ social skills Integrity/ honesty Acceptance of diversity Time management skills Life skills | Organisational skills Marketing skills Computer skills Problem-solving and strategic thinking Budgeting & financial management skills Project management skills Community facilitation skills Communication skills Report writing skills | Knowledge of legislation and policies related to local government Understanding of IDP process Understanding of funding mechanisms Ability to apply principles of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to maintain policies and procedures for Economic Development Division Ability to make logistical arrangements and coordinate budget for economic development activities Ability to comply with reporting requirements Ability to ensure effective marketing and tourism development | Degree / Diploma in Development Studies |
| LED Coordinator | English language proficiency (speaking, reading and writing) Ability to learn Interpersonal/ social skills Integrity/ honesty Acceptance of diversity Time management skills Life skills | Administrative and organisational skills Computer skills Problem-solving and strategic thinking Budgeting & financial management skills Project management skills Community facilitation skills Communication skills Report writing skills | Knowledge of legislation and policies related to local government Understanding of funding mechanisms Ability to apply principles of: • LED • Gender mainstreaming • Batho Pele • Stakeholder participation | Ability to manage LED projects | Degree in Public Administration or National Certificate: Local Economic Development |
| Technicians/Associated professionals | | | | | |
| Town Planning Technician | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills | Administrative skills Organisational skills Computer skills Networking and decision-making skills Problem-solving and strategic thinking People management skills Community facilitation skills Communication skills Report writing skills | Technical knowledge of town and regional planning Skill in the use of relevant software, e.g. electronic GIS systems Familiarity with Spatial Development Frameworks Research skills Policy development skills Knowledge of legislation and policies related to local government | Ability to undertake statutory development applications Ability to manage preparation of plans for land use plans, development plans and development applications Ability to undertake tasks related to strategic and development planning Ability to evaluate development proposals Ability to engage in community and advocacy planning | Diploma in town and regional planning |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| LED Officer | English language proficiency (speaking, reading and writing) Ability to learn Interpersonal/ social skills Integrity/ honesty Acceptance of diversity Time management skills Life skills | Administrative and organisational skills Computer skills Problem-solving and strategic thinking Budgeting Project management skills Community facilitation skills Communication skills Report writing skills | Knowledge of legislation and policies related to local government Understanding of funding mechanisms Ability to apply principles of: • LED • Gender mainstreaming • Batho Pele • Stakeholder participation | Ability to implement LED projects | National Certificate: Local Economic Development (NQF Level 4) |
| Community development | | | | | |
| Professionals | | | | | |
| Environmental Health Officers | English language proficiency (speaking, reading and writing) Ability to learn Interpersonal/ social skills Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Organisational skills Computer skills Communication skills Community facilitation skills People management skills Budgeting Problem solving and analytical skills Report writing skills Health and safety skills | Health and hygiene education skills Understanding of demand-responsive approach to service delivery Water quality monitoring skills Environmental pollution monitoring skills Ability to apply principles of: • Gender mainstreaming • Batho Pele • Stakeholder participation | Ability to assess impact of the environment on communities and human health Ability to manage and coordinate community health and hygiene education and awareness initiatives Ability to promote a demand-responsive approach to service delivery | National Diploma in Hygiene and Cleaning Management National Diploma in Environmental Health |
| Technicians/Associated professionals | | | | | |
| Environmental Health Practitioners | English language proficiency (speaking, reading and writing) Ability to learn Interpersonal/ social skills Integrity/ honesty Life skills Teamwork | Organisational skills Computer skills Communication skills Community facilitation skills Health and safety skills | Health and hygiene education skills Understanding of demand-responsive approach to service delivery Water quality monitoring skills Environmental pollution monitoring skills Ability to apply principles of: • Gender mainstreaming • Stakeholder participation | Ability to implement community health and hygiene education and awareness initiatives Ability to implement a demand-responsive approach to service delivery | NQF Level 4 qualification in Environmental Health |
| Service workers | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Community Development Workers | English language proficiency (speaking, reading and writing) Ability to learn Interpersonal/ social skills Cultural sensitivity/ acceptance of diversity Integrity/ honesty Life skills Teamwork | Understanding of development issues and priorities Organisational and administrative skills Community facilitation skills HIV/AIDS management skills Counselling skills Adult education and training skills Networking and advocacy skills Driving skills | Health and hygiene education skills Understanding of demand-responsive approach to service delivery Skills to liaise between communities and local authorities Poverty impact evaluation skills Ability to apply principles of: • Gender mainstreaming • Stakeholder participation • Batho Pele | Ability to train and support community-based volunteers Ability to assist in the removal of development deadlocks Ability to strengthen democratic social contract Ability to advocate an organised voice for the poor | Community Development Worker Learnership |

10.4.3 Skills required per occupational category in Water Services Providers

Table 20: Required skills and qualifications per occupational category in water services providers

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Leadership and management | | | | | |
| C.E.O./ MD | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills Community awareness People management skills Budgeting Financial management and planning skills Problem solving and analytical skills Strategic decision-making skills Report writing skills Monitoring and evaluation General understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Advanced leadership skills Knowledge of local government context and relevant legislation Understanding of municipal partnerships Sector-specific application of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to provide strategic direction for Water Services Provider Ability to ensure compliance with service level agreement Ability to develop a model consumer charter Ability to evaluate institutional performance against targets | Tertiary Qualification |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Directors & Executive Directors | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills People management skills Change management skills Budgeting Financial management and planning skills Project management skills Problem solving and analytical skills Strategic decision-making skills Report writing skills Monitoring and evaluation skills General understanding of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Knowledge of local government context and relevant legislation Contract management skills Sector-specific application of: • LED • Gender mainstreaming • Batho Pele • Cooperative governance • Stakeholder participation | Ability to provide strategic and administrative guidance to departments Ability to set conditions for provision of water services Ability to ensure that procedures for the limitation or discontinuation of water services are fair and equitable Ability to prepare and evaluate project proposals Ability to prioritise issues in planning and decision-making Ability to contribute to compilation of a water services business plan | Tertiary qualification in field relevant to departmental function |
| Plant manager | English language proficiency (speaking, reading and writing) Listening skills Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Knowledge management skills Computer skills Professional communication skills People management skills Change management skills Budgeting Financial management and planning skills Project management skills Problem solving and analytical skills Strategic decision-making skills Report writing skills Monitoring and evaluation skills | Technical knowledge relevant to plant operation Skills to oversee operation and maintenance of infrastructure Skills to plan infrastructure maintenance activities Skills to provide input in formulation of Key Performance Indicators (KPIs) and career development and succession plans or plant personnel | Ability to ensure effective and efficient operation of plant Ability to ensure that plant personnel perform duties as set out in KPIs | Tertiary qualification in field relevant to departmental function |
| Corporate services/ Core administration | | | | | |
| Professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------|----------------------|--------------|-------------------------|
| HR and Corporate Services manager | Similar to skills and qualifications required by HR and Corporate Services manager in municipality | | | | |
| Legal Officer | Similar to skills and qualifications required by Legal Officer in municipality | | | | |
| HR Officer | Similar to skills and qualifications required by HR Officer in municipality | | | | |
| Skills Development Facilitator | Similar to skills and qualifications required by Skills Development Facilitator in municipality | | | | |
| Technicians/ Associated professionals | | | | | |
| Performance Management Administrator | Similar to skills and qualifications required by Performance Management Administrator in municipality | | | | |
| Manager: Corporate Safety | Similar to skills and qualifications required by Manager: Corporate Safety in municipality | | | | |
| Occupational Health and Safety Officer | Similar to skills and qualifications required by Occupational Health and Safety Officer in municipality | | | | |
| Information & Communications Technology Specialist | Similar to skills and qualifications required by ICT Specialist in municipality | | | | |
| Clerks | | | | | |
| Administrative secretaries/ Personal assistants | Similar to skills and qualifications required in municipality | | | | |
| Administration Clerk: Human Resources | Similar to skills and qualifications required by Administration Clerk: Human Resources in municipality | | | | |
| Office Assistants | Similar to skills and qualifications required in municipality | | | | |
| Elementary occupations | | | | | |
| Clerical Assistant | Similar to skills and qualifications required in municipality | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Core finance | | | | | |
| Professionals | | | | | |
| Finance manager | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Computer skills Professional communication skills Community awareness Customer service skills People management skills Budgeting Financial management skills Problem solving and analytical skills Strategic decision-making and prioritisation skills Report writing skills Ability to formulate financial statements | Leadership skills Knowledge of local government context and relevant legislation Ability to implement finance management systems Negotiation skills Skills to integrate budgets and operational plans | Ability to ensure compliance with financial requirements of service contract Ability to manage operating and capital budgets and annual financial statements Ability to budget for multi-year capital projects and manage linked recurrent cost implications Ability to oversee billing and revenue collection | B Com or equivalent with accounting and administration |
| Accountant | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Accounting and bookkeeping skills Budgeting Financial management and administration skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of finance management systems Understanding of financial implications of service contract with municipality Ability to operate electronic financial systems Ability to capture data electronically | Ability to assist with implementation of finance management systems Ability to develop statistical reporting modules Ability to develop financial policies and procedures | B. Com Degree with Accounting I, II and III as subjects |
| Financial Officer - Budget | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Budgeting Management and supervision skills Financial management and administration skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of finance management systems Understanding of financial implications of service contract with municipality Ability to operate electronic financial systems Ability to capture data electronically | Ability to coordinate and compile Draft Estimate Report Ability to compile and publish budgets | B Com or CA (SA), Associate member of CIS or equivalent accounting qualification (M+3) |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Financial Officer - Capital | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Budgeting Management and supervision skills Financial management and administration skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of finance management systems Understanding of financial implications of service contract with municipality Ability to operate electronic financial systems Ability to capture data electronically | Ability to render accounting service regarding Capital Budgeting Ability to monitor capital expenditure Ability to maintain asset register | B Com or CA (SA), Associate member of CIS or equivalent accounting qualification (M+3) |
| Financial Officer - Financial Statements | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Budgeting Financial management and administration skills Management and supervision skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of finance management systems Understanding of financial implications of service contract with municipality Ability to operate electronic financial systems Ability to capture data electronically | Ensuring that municipality meets tax-related obligations Ability to ensure correct receipt, allocation and distribution of levies and equitable share Implement debt collection and credit control systems | B. Com or CA; Postgraduate qualification in taxation |
| Accountant: Internal Control | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Accounting and bookkeeping skills Financial management and administration skills Problem solving and analytical skills Ability to formulate financial statements | Knowledge of local government context and relevant legislation Understanding of finance management systems Understanding of financial implications of service contract with municipality Ability to operate electronic financial systems Ability to capture data electronically | Ability to develop, evaluate, implement and review internal control procedures Ability to monitor application of control procedures Ability to compile and maintain instruction manuals | Diploma in internal auditing or B. Com with auditing |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Junior Internal Auditor | English language proficiency (speaking and reading) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Professional communication skills Accounting and bookkeeping skills Financial management and administration skills Problem solving skills Ability to read financial statements | Knowledge of relevant financial legislation Understanding of finance management systems Understanding of financial implications of service contract with municipality Ability to operate electronic financial systems Ability to capture data electronically | Ability to evaluate adherence to established procedures Ability to verify bank balances and validity of receipts and disbursements Ability to verify accuracy of asset register Ability to establish whether projects are initiated, recorded and accounted for Ability to evaluate financial efficiency of municipal programmes | Senior certificate with Accounting as a subject |
| Clerks | | | | | |
| Finance clerks | English language proficiency (speaking and reading) Basic mathematical literacy Ability to learn Integrity/ honesty Time management skills Life skills Teamwork | Computer skills Organisational skills Basic bookkeeping skills Problem solving skills | Familiarity with WSP's financial systems and procedures Ability to capture data electronically | Ability to control printing orders Ability to receive requisitions and send to printing Ability to follow up to ensure printing is received in time | Grade 12 |
| Client services | | | | | |
| Professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Client Services Manager | English language proficiency (speaking, reading and writing) Ability to learn Emotional intelligence Interpersonal/ social skills Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Administrative skills Organisational and planning skills Budgeting skills Familiarity with corporate environment Knowledge of public sector Computer skills Communication skills Presentation skills Networking skills Customer service skills People management skills Problem solving and analytical skills Report writing skills | Corporate liaison skills Ability to source information Ability to communicate with stakeholders Sector-specific application of stakeholder participation Developing a communication strategy Contract management skills | Ability to develop, maintain and utilise channels of communication with stakeholders Ability to provide clients with advice and service Ability to set up and maintain service provider contracts Ability to control communications budget | A diploma/degree in Marketing/Communications and/or Behavioural Sciences |
| Clerks | | | | | |
| Help desk clerks | English language proficiency (speaking and reading) Ability to learn Interpersonal skills Integrity/ honesty Acceptance of diversity Life skills Teamwork | Office administration skills Basic computer skills Communication skills Awareness of protocol Customer service skills Telephone skills | Ability to communicate with customers Ability to obtain and interpret information from billing system | Ability to maintain document management system Ability to respond to telephonic and oral enquiries from staff and management Ability to attend to customer's queries and refer to relevant officers Ability to keep record of enquiries and responses | Senior Certificate and background in Communication |
| Senior Clerk: Service Fees | English language proficiency (speaking and reading) Ability to learn Interpersonal skills Integrity/ honesty Acceptance of diversity Life skills Teamwork | Basic computer skills Communication skills Awareness of protocol Customer service skills Telephone skills | Ability to communicate with customers Ability to obtain and interpret information from billing system | Ability to answer account-related enquiries | Grade 12 |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Cashier | English language proficiency (speaking and literacy) Interpersonal skills Integrity/ honesty Life skills Teamwork | Customer service skills Awareness of protocol | Ability to receive payments Ability to issue receipts | Ability to operate cash register | Grade 12 |
| Service workers | | | | | |
| Call centre operator | English language proficiency (speaking, reading and writing) Emotional intelligence and stress management skills Interpersonal skills Time management skills Life skills Teamwork | Customer service skills Public relations skills Awareness of protocol Computer skills Problem solving and analytical skills | Ability to operate trunk radio system, Zone Watch, telemetry, PABX and GIS system Monitoring skills | Ability to log and dispatch calls to relevant operational field staff Ability to monitor internal communications on trunk radio infrastructure Ability to monitor/ implement emergency procedures Ability to monitor trunk radio alarms and telemetry alarm systems for Water Services Ability to monitoring access control and security systems | Grade 12 |
| Technical Department: Water services provision and treatment | | | | | |
| Professionals | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Manager: Water Services Provision and Treatment Department | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Interpersonal skills Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Planning and organisation skills Communication skills Analytic and problem-solving skills Computer skills Project management skills Coordinating and monitoring skills Budgeting and cost control skills Change management and diversity management skills Report writing skills Understanding of Batho Pele principles Mentoring/ coaching skills Knowledge of community needs assessment methodologies, gender mainstreaming and national development priorities | Knowledge of relevant legislation, regulations, policy and procedures Technical and professional knowledge in job-related areas Knowledge of the water and sanitation discipline Knowledge of operational performance Ability to manage, liaise and conduct research and development Understanding of broader socio-political environment in which technical solutions are to be implemented | Ability to plan and design water and sanitation infrastructure within service area Ability to provide professional technical advice on design matters pertaining to water reticulation and distribution Ability to coach/mentor new incumbents | Bachelor Degree in Civil Engineering |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Engineer: Water and Sewerage | <p>English language proficiency (speaking, reading and writing)</p> <p>Basic mathematical literacy</p> <p>Ability to learn</p> <p>Emotional intelligence</p> <p>Interpersonal skills</p> <p>Integrity/ honesty</p> <p>Acceptance of diversity</p> <p>Time management skills</p> <p>Life skills</p> <p>Teamwork</p> | <p>Planning and organisation skills</p> <p>Communication skills</p> <p>Analytic and problem-solving skills</p> <p>Strategic thinking skills</p> <p>Computer skills</p> <p>Project management skills</p> <p>Coordinating and monitoring skills</p> <p>Budgeting and cost control skills</p> <p>Change management and diversity management skills</p> <p>Report writing skills</p> <p>Understanding of Batho Pele principles</p> <p>Mentoring/ coaching skills</p> <p>Knowledge of community needs assessment methodologies, gender mainstreaming and national development priorities</p> | <p>Knowledge of the planning, design, construction, operation and maintenance of water/sewer infrastructure</p> <p>Sewer/water network analysis</p> <p>Skills relevant to optimising the sewer/water system</p> <p>Investigating storm/ground water ingress</p> <p>SAP PS skills for management of capital budget projects</p> <p>Liaising with Waste Water/Bulk Water Departments regarding flow deviations etc.</p> <p>Skills for compiling design/ construction standards for networks</p> <p>Contract management skills</p> <p>Understanding of broader socio-political environment in which technical solutions are to be implemented</p> | <p>Ability to conduct capacity investigations</p> <p>Ability to update network plans</p> <p>Ability to facilitate new development requirements</p> <p>Ability to provide input for tariff modelling</p> <p>Ability to design and plan sewer/water networks and pump stations</p> <p>Ability to manage capital budget projects</p> <p>Ability to assist municipality with technical enquiries</p> <p>Ability to assist with training / skills development of staff</p> <p>Ability to develop maintenance strategy for sewer/water pipe networks</p> <p>Ability to ensure progress reports are compiled as required</p> <p>Ability to coach/mentor new incumbents</p> | BSc in Civil Engineering |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Senior Technical Officer - Water Supply | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Assertiveness Interpersonal skills Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Planning and organisation skills Communication skills Analytic and problem-solving skills Strategic thinking skills Computer skills Project management skills Ability to deal effectively with large workforce Coordinating and monitoring skills Budgeting and cost control skills Change management and diversity management skills Report writing skills Understanding of Batho Pele principles Mentoring/ coaching skills Knowledge of community needs assessment methodologies, gender mainstreaming and national development priorities | Knowledge of the planning, design, construction, operation and maintenance of water infrastructure Technical and professional knowledge in job-related areas Water network analysis Skills relevant to optimising the water system Skills for management of capital budget projects Understanding of work resources requirements for maintenance and operation of water services Liaising with Waste Water/Bulk Water Skills for compiling design/ construction standards for networks Contract management skills Understanding of broader socio-political environment in which technical solutions are to be implemented | Ability to manage and monitor water treatment plants and abstraction points Ability to manage and monitor surface & ground water resources Ability to prepare water statistics Ability to design and plan water infrastructure Ability to prepare tender documents and manage water projects Ability to coach/mentor new incumbents | A Diploma or Degree in Civil Engineering |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Senior Technical Officer - Water Treatment | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Assertiveness Interpersonal skills Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Planning and organisation skills Communication skills Analytic and problem-solving skills Strategic thinking skills Computer skills Project management skills Ability to deal effectively with large workforce Coordinating and monitoring skills Budgeting and cost control skills Change management and diversity management skills Report writing skills Understanding of Batho Pele principles Mentoring/ coaching skills Knowledge of community needs assessment methodologies, gender mainstreaming and national development priorities | Knowledge of the planning, design, construction, operation and maintenance of sewerage infrastructure Technical and professional knowledge in job-related areas Sewer network analysis Skills relevant to optimising the sewerage system Skills for management of capital budget projects Understanding of work resources requirements for maintenance and operation of sanitation services Liaising with Waste Water/Bulk Water Skills for compiling design/ construction standards for networks Contract management skills Understanding of broader socio-political environment in which technical solutions are to be implemented | Management of the Wastewater Treatment processes Development of the Wastewater Treatment processes Management of staff, equipment and co-ordination of treatment operations Administration of wastewater treatment related engineering contracts Ensures the efficient operation and maintenance of the Wastewater Treatment Plant Provision of healthy and safe working environment for the Wastewater Treatment Plants Financial management and control Ability to coach/mentor new incumbents | M+4 qualification (Civil or Water Care Works i.e. T4/BTech) with a focus on domestic and or Industrial Wastewater Process Engineering |
| Technicians/Associated professionals | | | | | |
| Superintendent: Water & Sewerage | English language proficiency (speaking, reading and writing) Basic mathematical literacy Ability to learn Emotional intelligence Assertiveness Interpersonal skills Integrity/ honesty Acceptance of diversity Time management skills Life skills Teamwork | Planning and organisation skills Communication skills Analytic and problem-solving skills Strategic thinking skills Computer skills Project management skills Ability to deal effectively with large workforce Coordinating and monitoring skills Budgeting and cost control skills Change management and diversity management skills Report writing skills Understanding of Batho Pele principles Mentoring/ coaching skills | Technical and professional knowledge in job-related areas Skills for maintaining the existing water/ sewer networks (planned and emergency work) Logistic skills for optimising usage of fleet and construction equipment Knowledge of Occupational Health & Safety Act Skills in management and control of allocated budgets Skills for optimising performance of water and sewerage reticulation systems Contract management skills | Ability to manage and supervise operations and maintenance of water/sewer systems in service area Ability to carry out minor extension and/or upgrading of water/sewer networks and new service connections Ability to provide records of maintenance done on networks Ability to supervise staff (leave, discipline, training, standby, overtime, etc.) Ability to supervise contractors Ability to ensure compliance with Occupational Health & Safety Act | T3 or an equivalent post-school qualification |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Laboratory Technician | English language proficiency (speaking, reading and writing) Basic science knowledge Ability to learn Time management skills Teamwork | General laboratory techniques Knowledge of water quality standards | Skills for analysing water samples Skills for interpreting results of water quality analyses | Ability to analyse water samples and determine if they meet with specified quality standards | National Certificate in Water Care |
| Technicians - Water Supply and Water Treatment | English language proficiency (speaking, reading and writing) Basic science knowledge Ability to learn Time management skills Teamwork | Planning and organisation skills Communication and customer service skills Analytic and problem-solving skills Computer skills and GIS knowledge Coordinating and monitoring skills Management of capital and operating budgets Budgeting and cost control skills Change management and diversity management skills Report writing skills Understanding of Batho Pele principles Mentoring/ coaching skills | Skills for designing and implementing quality checks Staff management and logistic skills Skills for planning, design, compilation of reports/ estimates/ annual budgets, etc. Skills for appointing contractors and monitoring progress of out-sourced contracts Ability to manage capital and operating budgets of Water & Sewer Divisions | Ability to design and perform quality checks on minor works done by internal staff and/or contractors Ability to investigate service deviations and implement and alterations Ability to liaise with project managers, support services and other departments Ability to issue instructions, compile work schedules, approve leave arrangements, etc. Ability to implement planning systems and procedures Ability to assist with queries and complaints from the public Ability to coach/mentor new incumbents | T3 or an equivalent post-school qualification |
| Clerks | | | | | |
| Meter Reader | English language proficiency (speaking, reading and writing) Time management skills Teamwork | Administrative and organisational skills Customer service skills Driving skills | Skills for locating meters Understanding of meter operation Skills for interpreting meter readings | Ability to take water meter readings and record results | Grade 10 or equivalent |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Licensing officer | English language proficiency (speaking, reading and writing) Time management skills Teamwork | Administrative and organisational skills Customer service skills Driving skills | Skills for interpreting water license documentation Ability to identify properties | Ability to liaise with customers Ability to verify of water users comply with licensing requirements | Grade 10 or equivalent |
| Service workers | | | | | |
| Connection Inspectors | English language proficiency (speaking, reading and writing) Time management skills Teamwork | Administrative and organisational skills Customer service skills Driving skills | Skills for interpreting water license documentation Ability to identify property and check if mains exist in the area Knowledge of types of water mains | Ability to liaise with customers Ability inspection of properties to ascertain whether private standpipes comply with water bylaws Ability to verify location, size and type of water mains for water supply applications | Grade 10 or equivalent |
| Craft & related workers | | | | | |
| Artisans (draughtsmen, fitters & turners, mechanics, electricians, plumbers, etc.) | Basic English language proficiency (speaking, reading and writing) Basic science/ technical knowledge Time management skills Teamwork | Proficiency in using tools and instruments of trade Interpretation of mechanical drawings and plans | Trade specific skills, i.e. knowledge of valves, hydraulics, water purification & sanitation techniques, water treatment processes, etc. Welding and plumbing skills | Ability to construct new works Ability to effect repairs to existing structures and facilities Ability to undertake preventative maintenance | Relevant apprenticeships/ learnerships |
| Plant & machine operators | | | | | |
| Operators (filters, pumps, water treatment plants, etc.) | English language proficiency (speaking, reading and writing) Basic technical knowledge Teamwork | Ability to follow operating instructions of plant and machinery Ability to follow occupational safety and health procedures | Skill at handling hazardous chemicals Skill at operating machinery and water treatment plant | Ability to ensure effective operation of plant/ machinery Ability to detect and report malfunctions and take appropriate action | ABET/ Relevant apprenticeships/ learnerships |
| Elementary occupations | | | | | |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category | Foundational skills | Generic skills | Task-specific skills | Capabilities | Required Qualifications |
|-----------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------|
| General labourers | Basic English language proficiency (speaking and reading) Teamwork | Ability to perform manual labour under supervision Ability to follow occupational safety and health procedures | Ability to perform manual labour related to water and sanitation infrastructure construction, operation, maintenance and repair | Ability to understand and follow supervisor instructions | ABET |

10.5 APPENDIX 5: HUMAN RESOURCES COMPLEMENT OF THE
SECTOR

**ASSESSMENT OF TRAINING PROGRAMMES AND CAPACITY
NEEDS FOR THE WATER SECTOR**

**Background Report in respect of the Human Resource
Complement of the Sector - Moving towards Quantification**

Geraldine Schoeman

AFROSEARCH

Development Consultants

P O Box 13540

Hatfield

0028

South Africa

(012) 362 2908

gera@afrosearch.co.za

10.5.1 The composition of water services institutions

The problems and challenges experienced by water services sector institutions in terms of fulfilling their respective legislative and policy indicate that several of these institutions suffer from significant shortfalls in *capacity*. It must be emphasised again that capacity encompasses several dimensions. These include:

- ❖ Skills, knowledge, attitudes and behaviour at *individual* level;
- ❖ Financial, material and human resources, as well as appropriate structures and processes at *institutional* level; and
- ❖ An enabling *environment* characterised by coherent policies, a supportive socioeconomic and political climate, etc.

In many cases, factors at all three levels *combine* to produce the problems described in the previous chapter. Nevertheless, it is possible to subject most of these problems to causal analysis so as to identify *specific* capacity gaps that are located at a particular level, and that would have to be addressed if water services sector institutions are to achieve their goals.

In order to identify capacity gaps related to *skills* (an aspect of individual capacity) and *human resources* (an aspect of institutional capacity) in water services sector institutions, it is necessary to accomplish two preliminary tasks:

- ❖ First, the *total human resources complement* of water services sector institutions – in other words, the total number of people employed in these institutions, as well as the proportion of these people directly involved in water and sanitation functions – has to be considered in relation to the magnitude of the tasks these institutions have to fulfil.
- ❖ Second, it is necessary to place the *organisational structure* of these institutions under the spotlight. More specifically, it is necessary to consider the departments and units that constitute a particular institution, and how responsibility for the various functions of the institution has been allocated between these departments and units. It is also necessary to ascertain which occupational categories exist within these departments and units, and how many people are employed in these occupational categories.

10.5.2 The current human resources complement of the sector

The task of determining the numbers of people employed in water services sector institutions is complicated by the fact that reliable data on employment in the sector is extremely difficult to come by. One of the most comprehensive audits of human resources in the sector is the Sector Skills Plan compiled by the LGSETA on the basis of workplace skills plans submitted by institutions. Another is the municipal capacity assessment conducted by the Municipal Demarcation Board.

However, a significant proportion of municipalities are limited in their capacity to provide accurate information on their own human resources. Hence, there has been concern as to whether or not the results of these audits are completely reliable. This conjecture is supported by the fact that data supplied by municipalities often contain numerous omissions and inconsistencies. Moreover, the format in which the results of these audits are presented in the Sector Skills Plan and on the website of the Municipal Demarcation Board leaves much to be desired, as personnel totals are not disaggregated in terms of departments or units within organisations.

Yet another factor complicating any attempt to obtain accurate data on employment figures in the sector is the fact that many municipalities are not keeping appropriate staff records. eThekweni Metropolitan Municipality, for instance, are not certain whether they have 26 000 or 29 000 staff members. According to the Human Resources Manager of this municipality, Mary-Anne Cobalt, it seems that some 3 000 records of staff members went astray during the amalgamation that accompanied the municipal demarcation process. Institutions also sometimes determine their numbers by employing disparate definitions of the term “employee.” For example, some local authorities count only permanent employees to arrive at total employment figures. By contrast, others will include all contract employees, be they on fixed, long-term or casual, short-term contracts (LGWSETA, 2003).

In an attempt to overcome these shortcomings, information from various sources was combined to provide an overall assessment of employment totals in the sector. This aggregate assessment is presented in the first sub-section below.

The size of the sector

As the table below indicates, municipalities that fulfil the functions of WSAs form a subset of water services sector institutions. Data on employment totals in this subset is provided by the Municipal Demarcation Board's capacity assessment. However, not all municipal personnel are directly involved with water and sanitation functions. This total can therefore be further subdivided into two categories: water and sanitation staff, and all other occupational categories. The format in which the Municipal Demarcation Board capacity assessment is published is sufficiently detailed to allow for an approximate estimate of the proportion of municipal staff belonging to each category. The Sector Skills Plan, on the other hand, pertains to all water services sector institutions, including DWAF, water boards and WSAs. It provides estimates of the numbers of personnel employed nationally in these institutions.

National totals of employment in water services sector institutions

| LOCAL GOVERNMENT | OTHER WATER SECTOR INSTITUTIONS [‡] |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <u>Water services authorities:</u> Water & sanitation staff [*] : 20 000 Councillors [‡] : 9000 Senior management [‡] : 2 800 Other staff: 46 200 Total personnel in WSAs[*] : 78 000 | DWAF: 12000 Water boards: 11000 Other water utilities: 9000 |
| Other local government personnel: 146 000 | |
| Total[‡]: 224 000 | Total: 32000 |
| [*] From Municipal Capacity Assessment (2003/ 2004) (Municipal Demarcation Board, 2004) [‡] From Sector Skills Plan 2003-2005 (LGWSETA, 2003), adjusted to take into account the transfer of approximately 8 000 DWAF employees to WSA, to be completed by 2008 | |

10.5.3 Size differences among water services authorities

A second issue that complicates the assessment of human resources in the sector is the fact that there is no "average" municipality. Small, rural municipalities differ considerably in size and capacity from, for instance, the large metros. In order to account for such differences, a typology of a selection of municipalities has been developed in a report entitled *Local Government Skills Audit: Review of Existing Data and Reports*, prepared for DPLG's Chief Directorate: Local Government Leadership Academy by Kitchin and Owens (2005). This typology is discussed in the first sub-section below. In the second and third sub-sections, it is applied to WSAs in order to estimate differences between them in terms of human resources and external challenges.

A typology of municipalities

The DPLG typology distinguishes between five types of municipalities:

- ❖ Group 1: Local municipalities which mainly consist of traditional authority areas and contain no established towns;
- ❖ Group 2: Subdivided in (a) and (b):
 - Group 2(a): Municipal areas with one or more towns but are located in areas which predominately fell within the TBVC states;
 - Group 2(b): Municipal areas with one or more towns which were located outside the TBVC states;

- ❖ Group 3: Category B municipality which contain large urban centres; and
- ❖ Group 4: Category A municipalities.

The criteria on which this typology was based included the number of staff in the municipality, the size of its annual budget and the size of the population in its area of jurisdiction. The common characteristics of each group in this typology are presented in the table below.

Characteristics of municipalities in the DPLG typology

| Municipal category | Description | Characteristics | Average number of municipal staff | Average number of households to staff member |
|---------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------|
| Group 1 | In areas with no established towns | No formal economy Most have vast traditional authority areas Service delivery levels – very low Percentage unserved and underserved households – very high | 50 | 1 300 |
| Group 2a | In areas with one or small towns (Former TBVC areas) | Limited formal economy Some traditional authority areas Service delivery levels – low to very low Percentage unserved and underserved households – High to very high | 180 | 300 |
| Group 2b | In areas with one or more small towns (Non-TBVC areas) | Sector specific formal economies Some traditional authority areas Service delivery levels low to moderate Percentage unserved and underserved households – Moderate to high | 230 | 80 |
| Group 3 | Large urban areas | Diverse economy Some traditional authority areas Service delivery levels – moderate to high Percentage unserved and underserved households – moderate to low | 1 500 | 60 |
| Group 4 | Metropolitan municipalities | Extensive development Multiple business districts and industrial areas Geographically extensive Diverse, complex economies Percentage unserved and underserved households – low | 5 000 | 130 |

A few general trends can be discerned when one compares municipalities belonging to the various groups (Kitchin & Ovens, 2005). In general, as one moves from Group 1 municipalities through to Group 4 metros:

- ❖ Skills levels of staff increase;
- ❖ Understanding among municipal officials regarding local government powers and functions increases;
- ❖ The adequacy of human resources systems in the municipality increases;
- ❖ Qualification levels of management increase (in Group 1, the majority of municipal managers have a Matric with diplomas or lower qualifications; in Group 4, the majority of municipal managers have post graduate degrees);
- ❖ The municipal organogram more closely conforms to the functions to be performed by the municipality;

- ❖ Average operating budgets increase;
- ❖ Grant dependency decreases;
- ❖ Experience levels of councillors increase;
- ❖ Demands on ward councillors tend to become lower;
- ❖ Unemployment rates and indigence levels in communities within its area of jurisdiction decrease; and
- ❖ The demand for community participation tends to decrease.

Applying the typology to water services authorities

In the report by Kitchin and Ovens (2005), the typology discussed above was applied to a total of 237 local and metropolitan municipalities, placing 32 of them in Group 1, 31 in Group 2(a), 137 in Group 2(b), 31 in Group 3 and the six metros in Group 4. In order to apply this typology to WSAs, it was necessary to extend it to *district municipalities*. This step was required because, in some cases, the WSA function has been devolved to local level, while in other instances it has been retained by the relevant district municipality.

Data on the staffing levels and budgets of district municipalities was therefore obtained from the Municipal Demarcation Board website. Based on this data, district municipalities that are WSAs were then categorised using the same typology as that applied by Kitchin and Ovens. All 170 WSAs in South Africa (including those that are local municipalities, those that are district and those that are metropolitan municipalities) were therefore sorted into five groups. Of these, 18 were placed in Group 1, 15 in Group 2(a), 96 in Group 2(b), 35 in Group 3 and six in Group 4.

Based in this classification, it was possible to identify certain significant differences in the common characteristics of the various groups of WSAs. For instance, it was found that the average numbers of water and sanitation staff in a WSA increase significantly as one moves from Group 1 to Group 4 WSAs. Similarly, the ratio of the number of households in the WSA's area of jurisdiction to the number of water and sanitation staff tends to decrease. The table below summarises a few of these trends for Group 1 to Group 3 WSAs.

A typology of water services authorities and common characteristics of each group

| | Group 1 | Group 2a | Group 2b | Group 3 |
|--------------------------------------------------------------------------|---------|----------|----------|---------|
| Number of municipalities that are WSAs | 18 | 15 | 96 | 35 |
| % households under-served with regard to water* (Census 2001 data) | 7% | 21% | 8% | 14% |
| % households under-served with regard to sanitation** (Census 2001 data) | 54% | 72% | 42% | 44% |
| Average no. of water staff per WSA | 2.7 | 9.0 | 26.8 | 115.9 |
| Average no. of sanitation staff per WSA | 2.3 | 4.5 | 30.5 | 102.5 |
| No. households to water staff member | 4 264 | 5 087 | 485 | 659 |
| No. households to sanitation staff member | 2 411 | 6 785 | 376 | 747 |

* Obtaining water from spring, rain tank, dam, pool, river, stream or water vendor

** VIP, pit latrine, bucket latrine or no sanitation

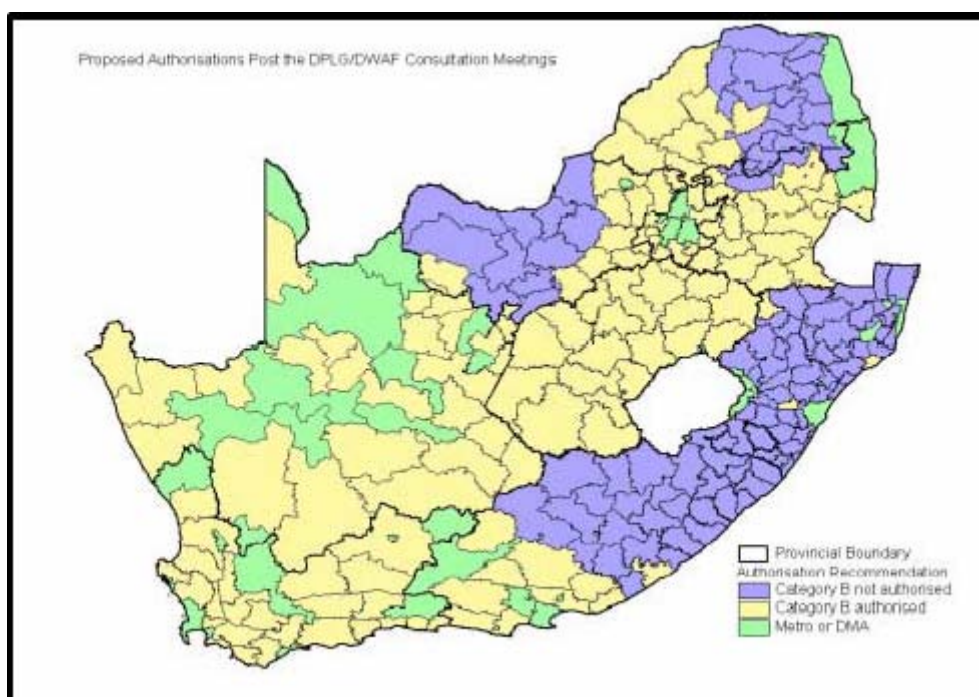
Differences between local and district municipalities

The differences between WSAs that are local municipalities and those that are district municipalities were then subjected to closer scrutiny. This step was motivated by the fact that there are significant regional differences in terms of the proportion of local municipalities that have been authorised to perform the water function. In areas characterised by low levels of economic development, local municipalities are generally not well-capacitated. In those areas, the WSA function is usually retained by the relevant district municipalities. However, these areas also pose the most severe challenges for a WSA in terms of the size of water and sanitation services backlogs, the strength of its revenue base, etc.

The table below indicates the numbers of local municipalities and district municipalities that are WSAs in each province. As this table shows, the majority of WSAs in most provinces are local municipalities. In the Free State, for instance, there are no district municipalities that have retained this function. The only exception to this rule is KwaZulu-Natal, where only a small minority of WSAs are local municipalities. The map below indicates the spatial distribution of local and district municipalities that are WSAs. In this map, the darkly shaded areas are district municipalities that have retained the water function.

Provincial breakdown of the numbers of local municipalities and district municipalities that are WSAs

| Province: | Number of district municipalities that are WSAs | Number of local municipalities that are WSAs | Total number of WSAs in province |
|------------------|--------------------------------------------------------|-----------------------------------------------------|-----------------------------------------|
| Eastern Cape | 6 | 10 | 16 |
| Free State | 0 | 20 | 20 |
| Gauteng | 1 | 9 | 10 |
| KwaZulu-Natal | 10 | 3 | 13 |
| Mpumalanga | 2 | 17 | 19 |
| North West | 3 | 9 | 12 |
| Northern Cape | 5 | 28 | 33 |
| Limpopo | 5 | 7 | 12 |
| Western Cape | 5 | 24 | 29 |
| Total | 37 | 126 | 164 |



Geographical distribution of local municipalities and district municipalities that are WSAs

The table below indicates a few of the significant differences between local and district municipality WSAs in each municipal category. As this table shows, the most significant differences are between local and district municipalities in Groups 2(b) and 3. In these groups, the average percentages of households with limited water and sanitation services are much higher in areas where district municipalities are WSAs than in areas where local municipalities are WSAs, indicating that these district municipalities have to contend with larger backlogs. A difference between district and local municipalities that is evident in all groups is that the ratio of households to water and sanitation staff is much higher in the former than in the latter.

Differences between local and district municipalities that are WSAs

| | Municipal category | | | | | | | |
|-------------------------------------------------------------------------------------------------|--------------------|-------|----------|------|----------|-------|---------|-------|
| | Group 1 | | Group 2a | | Group 2b | | Group 3 | |
| | LM | DM | LM | DM | LM | DM | LM | DM |
| Number of municipalities that are WSAs | 4 | 14 | 4 | 11 | 92 | 4 | 27 | 8 |
| % households under-served – water* (Census 2001 data) | 9% | 6% | 10% | 25% | 7% | 20% | 6% | 40% |
| % households under-served – sanitation** (Census 2001 data) | 83% | 45% | 77% | 70% | 41% | 61% | 35% | 74% |
| Average no. of water staff per WSA | 2.5 | 2.7 | 13.3 | 7.5 | 25.5 | 55.0 | 107.4 | 144.3 |
| Average no. of sanitation staff per WSA | 4.0 | 1.9 | 5.5 | 4.2 | 31.1 | 15.3 | 108.9 | 80.9 |
| No. households to water staff member | 1031 | 41102 | 2638 | 7680 | 470 | 1746 | 598 | 1007 |
| No. households to sanitation staff member | 559 | 44858 | 4107 | 8896 | 360 | 12607 | 630 | 2022 |
| * Obtaining water from spring, rain tank, dam, pool, river, stream or water vendor | | | | | | | | |
| ** VIP, pit latrine, bucket latrine or no sanitation | | | | | | | | |
| Shaded: significant differences between local municipalities and district municipalities | | | | | | | | |

These trends indicate that, in general, the challenges faced by district municipality WSAs in terms of fulfilling their legislative and policy mandate are *considerably greater than those facing local municipality WSAs of comparable size and capacity*.

Implications of size differences for capacity building

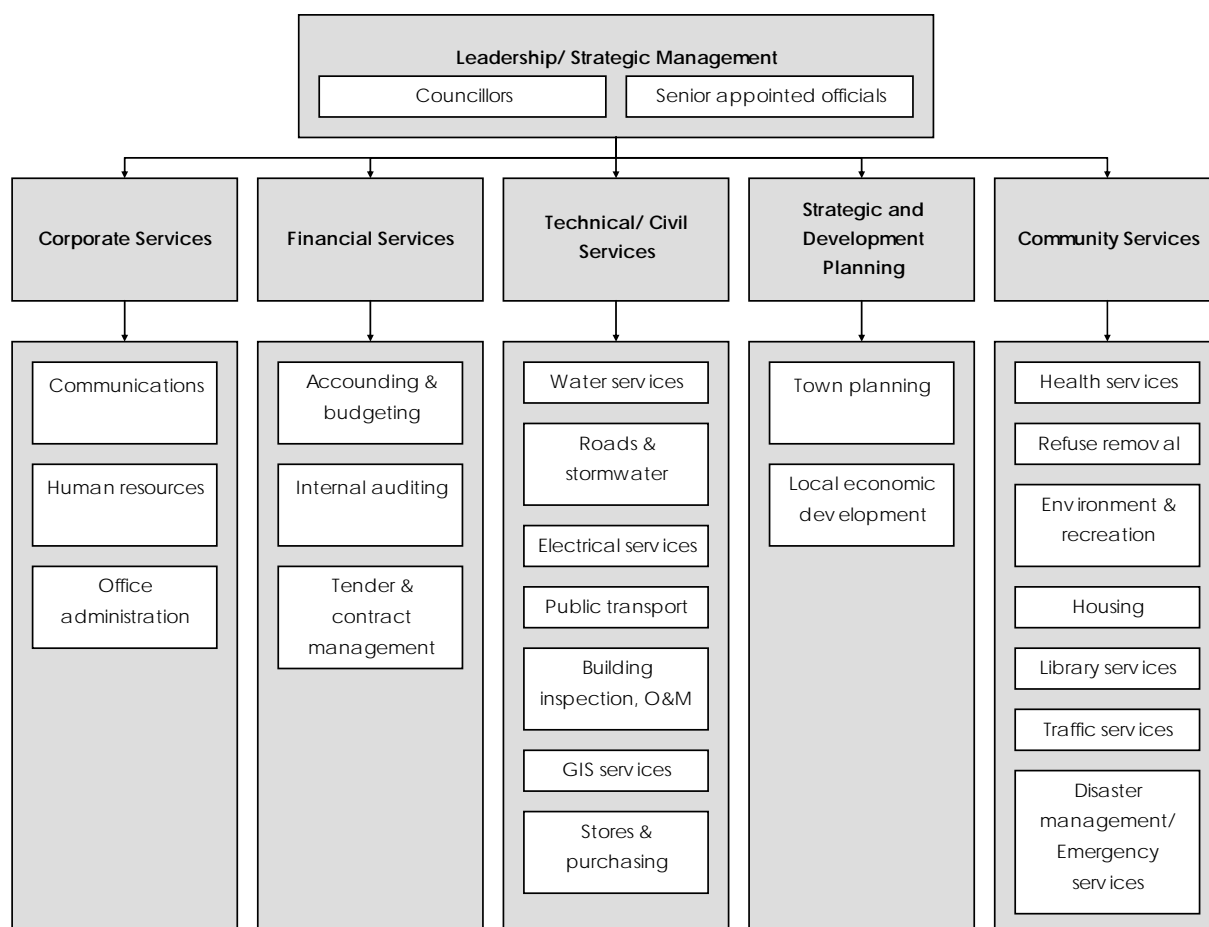
An important insight emerging from this categorisation is that those municipalities that have the *least capacity* in terms of skills and human resources also tend to face the *greatest external challenges* in terms of service delivery backlogs, inadequate income bases, etc. These tend to be:

- ❖ The smaller, rural municipalities /*local*/ municipalities that are WSAs; and
- ❖ Several of the medium-sized and larger *district* municipalities that are WSAs.

These institutions therefore face a dual challenge: not only are they required to increase their capacity to a level matching that of better-resourced municipalities; they also require *additional* capacity in order to deal with the greater challenges posed by the adverse environment in which they find themselves.

10.5.4 The organisational structure of water services authorities and water services providers

Despite the fact that municipalities vary greatly in size, they are fairly consistent in terms of their organisational structure. The diagram below depicts the organogram of a “typical” municipality. This organogram represents an aggregate of several municipal organograms that are available on the Worldwide Web, as well as a proposed structure for a municipality was obtained from an article entitled “*Lessons regarding municipal restructuring in non-metropolitan areas*” (Atkinson, Buso & Pienaar, 2003).



Organogram of an “average” municipality

As this diagram shows, the municipal personnel directly involved with water and sanitation services typically form part of the Technical/ Civil Services Department in a municipality. However, these staff members do not operate in isolation: they are under the authority of senior management and the political leadership of councillors. They also require input and support from various other departments, such as Corporate Services (in terms of human resources management and office administration), Finances (in terms of accounting and budgeting, as well as tender and contract management), Strategic and Development Planning (in terms of local economic development) and health services (in terms of community development workers). In other words, WSA (and, optionally, WSP) functions are spread over several levels and several departments of a municipality.

The first sub-section below outlines the various occupational categories within a municipality that are directly or indirectly involved with WSA and WSP functions. The second sub-section offers a first-order estimate of the *numbers* of personnel employed in each of these occupational categories in the “average” Group 1, Group 2a, Group 2b, Group 3 and Group 4 municipality.

10.5.5 Occupational categories involved with WSA and WSP functions

Data on the occupational categories within municipalities was obtained by conducting a search of job vacancies in municipalities advertised on the Worldwide Web. Information contained in such advertisements includes job titles, required duties, minimum qualifications and the municipal department in which the incumbent would be employed. It was therefore possible to reconcile the data obtained through this Web search with the composite municipal organogram, thereby increasing the level of detail in the organogram to include individual occupations. This list of occupational categories was corroborated and extended by means of additional data obtained from various publications.

Occupational categories related to WSA and WSP functions

| |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Leadership/ strategic management</u> Mayor & Executive Mayor, Senior Councillors, Ward Councillors, Ward Committee Members, Municipal Manager |
| <u>Department: Corporate Services</u> Director: Corporate Services |
| <u>Communications</u> Public Relations/ Media Liaison Officer, Information in Communications Technology Specialists |
| <u>Human Resources</u> Manager: Human Resources, Administration Clerk: Human Resources, Human and Labour Relations Officers, Performance Management Administrators, Skills Development Facilitators, Manager: Corporate Safety, Occupational Health Officers, Legal Officers, Salaries and Leave Administration Clerks |
| <u>Office administration</u> Secretaries/ Personal Assistants, Administration Officers: Councillors, Office Assistants |
| <u>Department: Financial Services</u> Municipal Finance Manager, Chief Financial Officer |
| <u>Accounting and Budgeting</u> Accountants, Financial Officer – Budget, Financial Officer – Capital, Financial Officer – Financial Statements, Senior Clerks, Clerks (debtors and creditors), Help desk clerks, Cashiers, Clerical Assistants |
| <u>Internal Auditing</u> Accountants: Internal Control, Junior Internal Auditors |
| <u>Tender and Contract Management</u> Manager: Supply Chain Management, Senior Manager: Budget |

| |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Department: Technical and Civil Services Director: Technical/ Civil Services, Civil Design Engineers |
| Water Services Manager: WSA, Planning Engineers, Planning (WSDP, etc.), Senior Technical Officers – Water Supply, Technicians – Water Supply, Senior Technical Officers - Water Treatment, Technicians – Water Treatment, Technicians – Information Management, Connection Inspectors, Artisans, Pump repairmen, Waste Management |
| Department: Strategic and Development Planning Director: Strategic and Development Planning (also IDP Manager) |
| Town and Regional Planning Town & Regional Planners |
| Local Economic Development Manager: Economic Development and Tourism, LED Managers, LED Coordinators, LED Officers, Community Development Workers |
| Health Services Environmental Health Officers, Environmental Health Practitioners |

10.5.6 Numbers of staff involved with WSA and WSP functions

The table below contains rough estimates of the numbers of staff in each occupational category in an “average” municipality in a given group. By multiplying these average figures with the total number of WSAs in each group, it also provides estimates of the total number of people countrywide in WSAs in the various occupational categories.

The rationale behind estimating the numbers of people in the various occupational categories is that it provides a basis for estimating the *magnitude* of current shortfalls in skills and human resources – a task that will be attempted in the next chapter.

Estimated numbers per occupational category in WSAs

| Occupational category (OC) | Current average number of people in this OC per WSA | | | | | Estimated <u>total number</u> of people currently in this OC in all WSAs (current average number per WSA x total number of WSAs in group) | | | | | |
|------------------------------------------------------|-----------------------------------------------------|----------|----------|---------|---------|----------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|---------|---------|-------|
| | Group 1 | Group 2a | Group 2b | Group 3 | Group 4 | Group 1 | Group 2a | Group 2b | Group 3 | Group 4 | Total |
| Leadership/ strategic management | | | | | | | | | | | |
| Mayor & Executive Mayor | 1 | 1 | 1 | 1 | 2 | 18 | 15 | 95 | 35 | 12 | 175 |
| Senior Councillors | 2 | 3 | 4 | 6 | 10 | 36 | 45 | 380 | 210 | 60 | 731 |
| Ward Councillors | 5 | 15 | 20 | 25 | 30 | 90 | 225 | 1900 | 875 | 180 | 3270 |
| Ward Committee Members | 6 | 20 | 30 | 40 | 50 | 108 | 300 | 2850 | 1400 | 300 | 4958 |
| Municipal Manager | 1 | 1 | 1 | 1 | 1 | 18 | 15 | 95 | 35 | 6 | 169 |
| Department: Corporate Services | | | | | | | | | | | |
| Director: Corporate Services | 1 | 1 | 1 | 1 | 1 | 18 | 15 | 95 | 35 | 6 | 169 |
| Communications | | | | | | | | | | | |
| Public Relations/ Media Liaison Officer | 0 | 1 | 1 | 1 | 1 | 0 | 15 | 95 | 35 | 6 | 151 |
| Information in Communications Technology Specialists | 0 | 0 | 1 | 5 | 10 | 0 | 0 | 95 | 175 | 60 | 330 |
| Human Resources | | | | | | | | | | | |
| Manager: Human Resources | 1 | 1 | 1 | 1 | 1 | 18 | 15 | 95 | 35 | 6 | 169 |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category (OC) | Current average number of people in this OC per WSA | | | | | Estimated total number of people currently in this OC in all WSAs (current average number per WSA x total number of WSAs in group) | | | | | |
|-------------------------------------------------|-----------------------------------------------------|----------|----------|---------|---------|---------------------------------------------------------------------------------------------------------------------------------------|----------|----------|---------|---------|-------|
| | Group 1 | Group 2a | Group 2b | Group 3 | Group 4 | Group 1 | Group 2a | Group 2b | Group 3 | Group 4 | Total |
| Administration Clerk: Human Resources | 1 | 1 | 1 | 2 | 5 | 18 | 15 | 95 | 70 | 30 | 228 |
| Human and Labour Relations Officers | 0 | 0 | 1 | 2 | 4 | 0 | 0 | 95 | 70 | 24 | 189 |
| Performance Management Administrators | 0 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 105 | 48 | 153 |
| Skills Development Facilitators | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 35 | 6 | 41 |
| Manager: Corporate Safety | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 35 | 6 | 41 |
| Occupational Health Officers | 0 | 0 | 0 | 4 | 10 | 0 | 0 | 0 | 140 | 60 | 200 |
| Legal Officers | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 70 | 24 | 94 |
| Salaries and Leave Administration Clerks | 0 | 2 | 2 | 10 | 25 | 0 | 30 | 190 | 350 | 150 | 720 |
| Office administration | | | | | | | | | | | |
| Secretaries/ Personal Assistants | 1 | 2 | 2 | 20 | 30 | 18 | 30 | 190 | 700 | 180 | 1118 |
| Administration Officers: Councillors | 0 | 1 | 2 | 10 | 20 | 0 | 15 | 190 | 350 | 120 | 675 |
| Office Assistants | 0 | 2 | 2 | 60 | 80 | 0 | 30 | 190 | 2100 | 480 | 2800 |
| Department: Financial Services | | | | | | | | | | | |
| Municipal Finance Manager | 1 | 0 | 1 | 1 | 1 | 18 | 0 | 95 | 35 | 6 | 154 |
| Chief Financial Officer | 1 | 1 | 1 | 1 | 1 | 18 | 15 | 95 | 35 | 6 | 169 |
| Accounting and Budgeting | | | | | | | | | | | |
| Accountants | 1 | 2 | 2 | 20 | 60 | 18 | 30 | 190 | 700 | 360 | 1298 |
| Financial Officer - Budget | 0 | 1 | 1 | 10 | 40 | 0 | 15 | 95 | 350 | 240 | 700 |
| Financial Officer - Capital | 0 | 0 | 1 | 10 | 40 | 0 | 0 | 95 | 350 | 240 | 685 |
| Financial Officer - Financial Statements | 0 | 0 | 0 | 10 | 40 | 0 | 0 | 0 | 350 | 240 | 590 |
| Senior Clerks | 1 | 1 | 2 | 10 | 60 | 18 | 15 | 190 | 350 | 360 | 933 |
| Clerks (debtors and creditors) | 0 | 2 | 4 | 60 | 120 | 0 | 30 | 380 | 2100 | 720 | 3230 |
| Help desk clerks | 0 | 1 | 1 | 10 | 60 | 0 | 15 | 95 | 350 | 360 | 820 |
| Cashiers | 2 | 4 | 4 | 40 | 80 | 36 | 60 | 380 | 1400 | 480 | 2356 |
| Clerical Assistants | 0 | 4 | 4 | 40 | 80 | 0 | 60 | 380 | 1400 | 480 | 2320 |
| Internal Auditing | | | | | | | | | | | |
| Accountants: Internal Control | 0 | 1 | 1 | 5 | 10 | 0 | 15 | 95 | 175 | 60 | 345 |
| Junior Internal Auditors | 0 | 3 | 4 | 10 | 20 | 0 | 45 | 380 | 350 | 120 | 895 |
| Tender and Contract Management | | | | | | | | | | | |
| Manager: Supply Chain Management | 0 | 1 | 1 | 1 | 1 | 0 | 15 | 95 | 35 | 6 | 151 |
| Senior Manager: Budget | 0 | 1 | 1 | 1 | 1 | 0 | 15 | 95 | 35 | 6 | 151 |
| Department: Technical and Civil Services | | | | | | | | | | | |
| Director: Technical/ Civil Services | 1 | 1 | 1 | 1 | 1 | 18 | 15 | 95 | 35 | 6 | 169 |
| Civil Design Engineers | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 70 | 30 | 100 |

CAPACITY NEEDS FOR THE WATER SECTOR

| Occupational category (OC) | Current average number of people in this OC per WSA | | | | | Estimated total number of people currently in this OC in all WSAs (current average number per WSA x total number of WSAs in group) | | | | | |
|-----------------------------------------------------------------|-----------------------------------------------------|----------|----------|---------|---------|---------------------------------------------------------------------------------------------------------------------------------------|----------|----------|---------|---------|-------|
| | Group 1 | Group 2a | Group 2b | Group 3 | Group 4 | Group 1 | Group 2a | Group 2b | Group 3 | Group 4 | Total |
| Water Services | | | | | | | | | | | |
| Manager: WSA | 0 | 1 | 1 | 1 | 1 | 0 | 15 | 95 | 35 | 6 | 151 |
| Planning Engineers | 0 | 0 | 2 | 3 | 4 | 0 | 0 | 190 | 105 | 24 | 319 |
| Planning (WSDP, etc.) | 0 | 0 | 1 | 3 | 6 | 0 | 0 | 95 | 105 | 36 | 236 |
| Senior Technical Officers - Water Supply | 1 | 1 | 4 | 10 | 20 | 18 | 15 | 380 | 350 | 120 | 883 |
| Technicians - Water Supply | 0 | 2 | 10 | 20 | 60 | 0 | 30 | 950 | 700 | 360 | 2040 |
| Senior Technical Officers - Water Treatment | 1 | 1 | 3 | 10 | 20 | 18 | 15 | 285 | 350 | 120 | 788 |
| Technicians - Water Treatment | 0 | 2 | 10 | 20 | 60 | 0 | 30 | 950 | 700 | 360 | 2040 |
| Technicians - Information Management | 0 | 1 | 1 | 6 | 15 | 0 | 15 | 95 | 210 | 90 | 410 |
| Connection Inspectors | 1 | 1 | 4 | 10 | 80 | 18 | 15 | 380 | 350 | 480 | 1243 |
| Artisans | 1 | 2 | 10 | 16 | 160 | 18 | 30 | 950 | 560 | 960 | 2518 |
| Pump repairmen | 1 | 3 | 10 | 16 | 50 | 18 | 45 | 950 | 560 | 300 | 1873 |
| Waste Management | 0 | 0 | 2 | 5 | 20 | 0 | 0 | 190 | 175 | 120 | 485 |
| Department: Strategic and Development Planning | | | | | | | | | | | |
| Director: Strategic and Development Planning (also IDP Manager) | 1 | 1 | 1 | 1 | 1 | 18 | 15 | 95 | 35 | 6 | 169 |
| Town and Regional Planning | | | | | | | | | | | |
| Town & Regional Planners | 0 | 1 | 1 | 10 | 12 | 0 | 15 | 95 | 350 | 72 | 532 |
| Local Economic Development | | | | | | | | | | | |
| Manager: Economic Development and Tourism | 0 | 1 | 1 | 1 | 1 | 0 | 15 | 95 | 35 | 6 | 151 |
| LED Managers | 1 | 1 | 1 | 4 | 8 | 18 | 15 | 95 | 140 | 48 | 316 |
| LED Coordinators | 0 | 4 | 6 | 20 | 40 | 0 | 60 | 570 | 700 | 240 | 1570 |
| LED Officers | 0 | 6 | 8 | 40 | 80 | 0 | 90 | 760 | 1400 | 480 | 2730 |
| Community Development Workers | 10 | 10 | 10 | 20 | 50 | 180 | 150 | 950 | 700 | 300 | 2280 |
| Health Services | | | | | | | | | | | |
| Environmental Health Officers | 1 | 1 | 1 | 10 | 40 | 18 | 15 | 95 | 350 | 240 | 718 |
| Environmental Health Practitioners | 0 | 5 | 6 | 30 | 60 | 0 | 75 | 570 | 1050 | 360 | 2055 |