

Drinking Water Quality Regulation Strategy



The role of national and provincial government
in regulation of drinking water quality

September 2005



PREFACE

This Regulation Strategy forms part of a series which is intended to provide the water sector with the information needed to monitor, manage, communicate and regulate drinking water quality in order to protect public health.

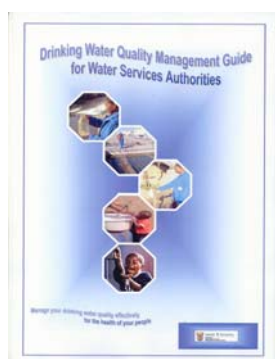
The **Drinking Water Quality Regulation Strategy** is intended to provide the Department of Water Affairs and Forestry: Water Services Regulation, National and Provincial Government and Water Services Authorities with an understanding of the short-, medium- and longer-term Drinking Water Quality Regulation Strategies, and the associated institutional arrangements, necessary for effective Drinking Water Quality Regulation.

The following documents form the series:

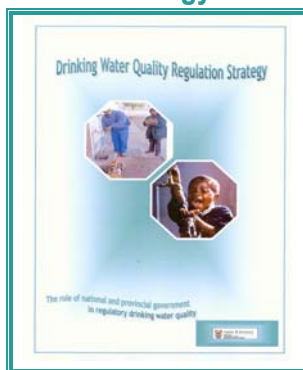
A Drinking Water Quality Framework for South Africa



Drinking Water Quality
Management Guide for
Water Services Authorities



**Drinking Water
Quality Regulation
Strategy**



Water Services Authority
Awareness Pamphlet



Consumer
Awareness Booklet



For further information on Drinking Water Quality Regulation, or copies of the documents in the series, please contact:

- ❖ The Department of Water Affairs and Forestry: Water Services Regulation on (012) 3366600, or the website: <http://www.dwaf.gov.za>.



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1. INTRODUCTION

1.1 BACKGROUND

Access to safe drinking water is a basic human right and essential to people's health. Safe drinking water that complies with the South African National Standard (SANS) 241 Drinking Water Specification does not pose a significant risk to health over a lifetime of consumption, including different sensitivities that may occur between life stages (babies and infants, the immuno-compromised and the elderly). Improving access to safe drinking water can thus result in tangible benefits to public health and every effort should be made to achieve a drinking water quality that complies with national safety standards.

1.2 ENABLING LEGISLATION

The primary health impact of drinking water quality is well recognised, and has resulted in the development of substantial enabling legislation, frameworks and strategies relating to the provision of water services.

Key references relating to the provision of safe drinking water in South Africa include:

- ❖ **Water Services Act** (No. 108 of 1997) – The Water Services Act gives substance to constitutional requirements with respect to access, national norms and standards and the institutional framework for the provision of water services;
- ❖ **Compulsory National Standards for the Quality of Potable Water** (2001, Regulation 5 of Section 9 of the Water Services Act) – requires that Water Services Authorities (WSAs) implement drinking water quality monitoring programmes to monitor, improve and report on drinking water service delivery;
- ❖ **Strategic Framework for Water Services** (2003) – The Strategic Framework contains guidelines for the provision of water services, including drinking water quality, and role of the Department of Water Affairs (DWA) as sector regulator;
- ❖ **Municipal Structures Act** (No.117 of 1998) – This Act provides for functions and powers of municipalities and other local government structures, of which water services is one of many primary functions;
- ❖ **National Health Act** (No. 61 of 2003) – This Act promotes fulfilling the rights of people of South Africa to an environment that is not harmful to their health or well being.
- ❖ The **National Water Act** (No.36 of 1998) is the principal legal instrument relating to water resources management in South Africa and contains comprehensive provisions for the protection, use, development, conservation, management and control of South Africa's water resources.
- ❖ The **National Water Resources Strategy** (2004) provides the framework within which water resources will be managed throughout the country.



1.3 DRINKING WATER QUALITY MANAGEMENT IN SOUTH AFRICA

Progress in the provision of water services by Water Services Institutions has been considerable during the first 10 years of democracy. However, while WSAs are required to ensure that drinking water quality complies with national drinking water standards, ongoing research shows that, in many non-metropolitan areas in South Africa, drinking water is often of poor quality.

The main reasons for this failure to comply with national drinking water standards are:

- ❖ WSAs are not aware of the necessary requirements to set up an effective Drinking Water Quality Management programme;
- ❖ Management and monitoring of drinking water services are often inadequate;
- ❖ Infrastructure is poorly maintained;
- ❖ WSAs may be hindered by institutional capacity problems such as insufficient or untrained staff, and budgetary constraints, and
- ❖ Appropriate interventions are not in place to address poor quality drinking water.

A situational assessment of drinking water quality monitoring and management practices and role players in each province was undertaken. The situational assessment identified the following key issues as critical to achieving effective Drinking Water Quality Management in South Africa:

- ❖ There is a need for raised awareness of drinking water quality within civil society and within political structures;
- ❖ National and provincial Drinking Water Quality Management champions are required to provide leadership and ensure provincial sector progress;
- ❖ WSAs need improved understanding of regulatory requirements relating to Drinking Water Quality Management;
- ❖ There is a need for increased Drinking Water Quality Management-orientated personnel at provincial and local government level;
- ❖ There is a need for a provincial sector Fora focusing on drinking water quality issues;
- ❖ Provincial key stakeholder roles and responsibilities need to be clearly understood and allocated;
- ❖ Drinking water quality data must be easily accessible to all stakeholders;
- ❖ Accessible, accurate analytical support is required to service WSAs;
- ❖ Simple, structured, adequate Drinking Water Quality Management programmes are required to be implemented by those responsible for water services provision;
- ❖ Water quality monitoring undertaken by Environmental Health Practitioners needs to be restructured to be of useful input to WSAs (presently seen as remote from optimisation of operational issues and challenges);
- ❖ Community awareness needs to increase and data must be managed and communicated appropriately, and



- ❖ In the case of Municipal Systems Act (No. 32 of 2000) Section 78 transfers of water treatment works from DWAF to WSAs, careful change management is required to ensure smooth transition and continuity of the water service.

In recognition of these challenges, a Drinking Water Quality Framework for South Africa is being developed to ensure that WSAs are supported and enabled to effectively manage the quality of drinking water supplied to consumers.

2. DRINKING WATER QUALITY REGULATORY STRATEGIES

The current situation in South Africa is that many Water Services Authorities do not undertake their mandated responsibilities for drinking water quality monitoring, management and communication, and thus most Water Services Authorities fall far short of the vision of '*Effective Drinking Water Quality Management Ensuring Safe Drinking Water*'. Due to the need for immediate action, the perceived lack of resources and capacity in the WSAs to conduct the required drinking water quality management (including monitoring), and the perceived lack of understanding of the WSAs regarding governance requirements, responsibilities and accountabilities, short- and medium-term intervention strategies followed by a longer term Drinking Water Quality Management strategy are necessary.

2.1 KEY PRINCIPLES FOR REGULATION

Drinking Water Regulatory strategies are based on the following key principles:

- ❖ Acknowledgement of all applicable guiding legislation and the Strategic Framework for Water Services (2003);
- ❖ The mandated role of National and Provincial government to actively pursue both regulatory governance and co-operative government in the water services sector, thereby assisting Local Government in continual improvement;
- ❖ Acknowledgment, support and building on existing successful implementation models;
- ❖ DWAF, as the sector leader and regulator, will intervene proactively and appropriately as required;
- ❖ Water Services data will be used to identify needs and guide national programmes such as the Municipal Infrastructure Grant (MIG), the Capacity Building Grant (CBG) and track the efficiency of WSA implemented projects, and
- ❖ The Drinking Water Quality Regulatory Strategy must ensure that it does not '*undermine the executive authority of Local Government, but should set national Norms and Standards and enforce legislation*' (Strategic Framework for Water Services, 2003).

A phased approach is recommended be adopted to ensure that:

- ❖ Areas of severe failure are identified and addressed in the short term;
- ❖ Early wins are secured, thereby demonstrating the inherent value of the approach, and



- ❖ A coordinated development and deployment of the Drinking Water Quality Regulation Strategy over the longer term is possible.

This approach will limit the disruption of existing operational procedures whilst ensuring an effective service to stakeholders.

2.2 SHORT-TERM INTERVENTION STRATEGY

The goal of *'Improved Drinking Water Quality Soonest'*, will be implemented *via* a number of short-term actions, to be implemented within one year.

Action 1: Highlighting the profile of Drinking Water Quality Management at Provincial Service Delivery Fora

It is proposed that at a provincial level, the profile of Drinking Water Quality Management is raised to drive improved delivery of safe drinking water. Where Service Delivery Fora currently exist, Drinking Water Quality Management is recommended to be formally admitted onto the agenda for attention. Where Fora do not yet exist, it is recommended that they be established to address provincial drinking water quality issues. These Fora should allow for the involvement and full participation of all stakeholders.

A Task Team is proposed to initiate and oversee the formation of the Drinking Water Quality Management Forum, or to modify existing fora to highlight the profile of Drinking Water Quality Management. The Task Team will comprise senior representatives of at least the following key sector members:

- ❖ DWAF Regional Office;
- ❖ Provincial Department of Local Government;
- ❖ Provincial Department of Health, and
- ❖ SALGA.

The Task Team will be led by an agreed 'Lead Agent', with the default Lead Agent being the DWAF Regional Office. An alternate Lead Agent may, however, be determined by the Task Team, dependant on the relative strengths and existing sector initiatives.

A number of Fora have been identified where water services and drinking water quality issues are discussed at a Provincial level (Table 1). These Fora can be considered for addressing provincial drinking water quality issues, but awareness may need to be built before the profile of drinking water quality is adequately emphasised.


Table 1: Existing Provincial Water-oriented Fora

Province	Existing Fora	Issues addressed at Fora	Recommended actions
Eastern Cape	❖ Buffalo City and Amatola Water Board Bilateral Forum.	❖ Focus is primarily bulk water services.	Since stakeholder involvement is limited in the existing Forum, implementation of appropriate Task Team and new Forum is recommended.
Free State	❖ Free State Water Sector Forum; ❖ Operations Committee (Free State Water Quality Management Project).	❖ Quarterly meetings to discuss Consultative Audit results & identify problem areas / improvements. ❖ Biannual water quality feedback session.	Forum and Task Team have been implemented. Evaluate and modify if required.
Gauteng	❖ Water Services Forum; ❖ Water quality meetings.	❖ Monthly meeting to discuss water issues; ❖ Regular meetings to discuss water quality related issues.	Implement Task Team to modify existing Forum.
KwaZulu-Natal	❖ Catchment Management Forums. ❖ DWAF Masibambane Forum.	❖ Main focus is protection of water resources.	Implement Task Team to modify existing Masibambane Forum.
Limpopo	❖ Satellite Management Meeting (DWAF district and top management drinking water quality meetings). ❖ Collaborative Coordinating Committee meetings.	❖ Monthly meetings comprising largely DWAF officials; ❖ Monthly meeting focussing largely on water & sanitation issues, also infrastructure and transfers.	Implement Task Team to modify existing Forum.
Mpumulanga	❖ Mpumulanga Joint Operations Committee (MJOC).	❖ Regular meetings, but DWQM is not a focal agenda item.	Implement Task Team to modify existing Forum.
Northern Cape	❖ District Municipality Water and Sanitation Sector Forums.	❖ Focus is primarily sanitation and water infrastructure.	Implement Task Team to modify existing Forum.
North West	❖ None identified by the stakeholders interviewed.	❖	Implementation of appropriate Task Teams and Forum.
Western Cape	❖ DoH Provincial Liaison Committee meetings, Provincial Environmental Health Forums, Regional Health Forums. ❖ DWAF Masibambane Forum (being established).	❖ DWQ issues are discussed.	Task Team and Forum has been implemented. Evaluate Masibambane Forum and modify if required.



Action 2: Awareness Creation and Communication of Responsibilities for Urgent Cases

A Drinking Water Quality Management Communication Campaign is planned, including:

- ❖ A pamphlet to inform WSAs of their duty to undertake monitoring and communication as dictated by the regulated Compulsory National Standards, as well as the minimum requirements for effective Drinking Water quality Management;
- ❖ A pamphlet to increase consumer awareness of Drinking Water Quality issues;
- ❖ Provincial Roadshows to communicate the Drinking Water Quality Framework to all sector stakeholders, and obtain feedback to improve the document.

Action 3: Support and Intervention

When regulatory investigation reveals that a WSA is providing water of unacceptable quality, or where the WSA is not undertaking any water quality monitoring, the Regional Director: DWAF will communicate *via* a letter or meeting with the Municipal Manager pointing out the WSA's responsibilities and request immediate compliance. DWAF will advise non-compliant WSA's on regulatory requirements, by providing an information pack on Drinking Water Quality Management, and the provision of practical guidelines for implementation of effective Drinking Water Quality Management. In cases of severe drinking water quality failure, emergency response will also be instituted.

2.3 MEDIUM-TERM INTERVENTION STRATEGY

Drinking water quality will be improved by the implementation of two medium-term actions, to be executed within two to three years:

Action 4: Implementation of Drinking Water Situational Assessments

Action 4a: A once-off baseline assessment of drinking water quality should be undertaken to gather current data from all WSAs as well as to inform them of their requirement to undertake systematic monitoring and communication of drinking water quality results as specified in the regulated Compulsory National Standards.

Action 4b: DWAF is recommended to undertake Drinking Water Quality Management System Assessments where a wide-ranging assessment of WSA performance (including the condition of each water treatment works, an assessment of Drinking Water Quality Management practices at each water treatment works, compliance to national norms and standards) is conducted. This assessment will be used to indicate the level of support required from Provincial & National Government.

Action 5: Initiation of Provincial Drinking Water Quality Consultative Audits

Since many WSAs do not adhere to the Compulsory National Standards for the Quality of Potable Water, a process needs to be initiated by Provincial or National Government to rectify the situation. Consultative audits, similar to those practised monthly in the Free State, are recommended to be



initiated in each province - with provincial government undertaking a monthly audit of drinking water quality supplies and communicating the results to the WSA Municipal Manager. Quarterly consultative audit meetings are recommended to discuss drinking water quality failures, provide reasons for failures and propose actions to rectify drinking water quality failures.

These co-operative governance-oriented drinking water quality audits will not replace the required drinking water quality monitoring and self-regulation to be undertaken by WSAs or the recommended regulatory audits undertaken by DWAF, but are seen as an interim supportive measure to be undertaken until capacity is built at the local level and Water Services Authorities can undertake their mandated requirements of drinking water quality monitoring, management and communication.

Information arising from the Consultative Audits should be:

- ❖ Communicated to Provincial Drinking Water Quality Management Fora, where the problem areas identified through the above process are discussed and prioritised (ranked). These audits can be used to determine required regulatory intervention, assess progress with achieving drinking water quality compliance, and recommend Municipal Infrastructure Grant (MIG) and Capacity Building Grant (CBG) funding where capacity is lacking.
- ❖ Captured onto a DWAF Drinking Water Quality Management database and made available to interested and affected parties.

2.4 LONGER-TERM DRINKING WATER QUALITY MANAGEMENT STRATEGY

To achieve the longer term vision of *'Effective Drinking Water Quality Management Ensuring Safe Drinking Water'*, WSAs are required to fulfil their mandated requirements of drinking water quality monitoring, management and communication, with DWAF fulfilling the role of National Policy-maker, Supporter and Regulator.

The ideal long-term Drinking Water Quality Management objective is that:

- ❖ WSAs are supported to undertake effective Drinking Water Quality Management from catchment to consumer, using a comprehensive, preventative risk-management approach, ensuring safe drinking water quality and protection of public health. While DWAF/CMAs are responsible for the implementation of national catchment water quality monitoring programmes, WSAs will also need to undertake reactive water quality monitoring in the upstream catchment during water quality failures to establish the source of the problem.

As verification of the performance of their Drinking Water Quality Management system, WSAs are required to undertake drinking water quality compliance monitoring, at frequencies appropriate to factors such as the population served, the volume of water treated and the frequency of water quality problems. The purpose of this monitoring is to provide confidence in the provision of safe drinking water. However, in recognition of limited capacity within WSAs,



the minimum requirements for effective Drinking Water Quality Management have been prepared, including:

- Adequate numbers of appropriately skilled and experienced staff, with staff being comprehensively trained on implementation of effective Drinking Water Quality Management;
- Effective water treatment including clarification (where required) and disinfection processes;
- Operator's manuals detailing operation of the water works under routine and drinking water failure conditions;
- Metering of chemical dosages and flows and recording of process information in process logs;
- Effectively implemented Operational Monitoring Programmes and Drinking Water Quality Compliance Monitoring Programmes;
- Adequate monitoring equipment and training on the use of this equipment;
- A method of recording drinking water quality results;
- Access to, and an ability to interpret drinking water quality results against the SANS 241 Drinking Water Quality Specification or Department of Water Affairs and Forestry, Department of Health and Water Research Commission Quality of Domestic Water Supplies, Volume I: Assessment Guide, and
- Planned Maintenance and Upgrade Schedules for Water Treatment Infrastructure, including adequate and timeous budgeting.



Operational and Compliance Monitoring is essential for effective Drinking Water Quality Management

Fulfilment of minimum requirements is deemed acceptable for those WSAs classified as having limited capacity. The stronger or better-capacity WSAs are expected to undertake comprehensive Drinking Water Quality Management from catchment to consumer.

- ❖ The Provincial supportive consultative audits are gradually phased out in provinces which are demonstrating effective Drinking Water Quality Management. The frequency of consultative auditing is recommended to decrease with increasing conformance to the regulations of the Water Services Act (No. 108 of 1997) monitoring requirements and compliance with the SANS 241 Drinking Water Specification.
- ❖ DWAF, as the sector regulator, is the recommended authority for undertaking Drinking Water Quality Management Regulatory Audits, where a comprehensive assessment of Drinking Water Quality Management is undertaken. These Regulatory Audits will be aligned with the overall



Regulatory Strategy for the regulation of Water Services, and are likely to be random and unscheduled, with an emphasis on verified self-reporting by WSAs.

- ❖ Where there is lack of adherence to the monitoring requirements specified in the Water Services Act (No. 108 of 1997), or there is evidence of drinking water quality problems of an acute or chronic nature, it is recommended that DWAF intervene in a proactive manner according to the Drinking Water Quality Regulatory Strategy. In cases of severe drinking water quality failure, emergency response will also be instituted.

2.5 DRINKING WATER QUALITY REGULATION: INCENTIVES AND SANCTIONS

The Department of Water Affairs and Forestry is committed to exercise incentive-based regulation but in cases of reluctance or negligence by the WSA management to rectify identified non-compliant activities relating to Drinking Water Quality Management, while being capable of doing so, then punitive actions will be considered. Both supportive measures and punitive actions may be implemented in the short-, medium- and long-term.

To regulate proactively, DWAF will perform assessments of Drinking Water Quality Management procedures at Water Services Provider level to identify areas of non-compliance and draw the attention of the WSA to these areas to prevent failure of drinking water quality. However, it should be noted that it remains the responsibility of the WSA to ensure that the water supplied to its consumers is of safe and acceptable quality and to ensure that treatment and reticulation procedures are of acceptable standards.

2.5.1 INCENTIVES FOR DRINKING WATER QUALITY COMPLIANCE

DWAF will use incentives to encourage compliant WSA's to maintain the *status quo*. Proposals for incentives include:

- ❖ Classification and publishing of Drinking Water Quality Management status: The Drinking Water Quality Management classification status could be used by WSAs for benchmarking and marketing purposes. The Drinking Water Quality Management classification status of a WSA could be published on the Internet, in newspapers and WSA Annual Reports;
- ❖ WSAs classified as 'Excellent' could be considered as Drinking Water Quality Management models or examples and could be given a training grant to train, support and mentor lesser-performing WSAs;
- ❖ Letters and certificates of recognition could be presented to WSAs which improve their Drinking Water Quality Management classification status;
- ❖ Competitions could be held for the implementation of the best Drinking Water Quality Management strategies or improvement plans, with winning WSAs being awarded by the Water Institute of Southern Africa (WISA).



2.5.2 PROPOSED ACTIONS AGAINST DEFAULTING OR NEGLIGENT WATER SERVICES AUTHORITIES

Should a WSA fail to meet its legislated obligations regarding service delivery according to the promulgated Norms and Standards under section 9 or 10 of the Water Services Act (No. 108 of 1997), it will be in the best interests of the consumer if the National Regulator follows a defined course of action in order to obtain compliance from the defaulting Authority.

Steps will follow in the numerical sequence as necessary should non-compliance continue despite intervention efforts made by DWAF.

Step 1: Investigation

Since the consumer can be regarded as the most effective monitoring entity, it is expected that the DWAF, in the majority of cases, would be notified by the public of non-compliance, by written correspondence or telephonically. The National Regulator should perform the following:

- ❖ Verify information received through on-site investigation and/or consultation with the WSA. If the onsite investigation indicates a significant problem which seriously endangers public health, the emergency management team should be constituted to rectify the problem;
- ❖ The findings of this investigation must be documented, including dated photographs to emphasise the magnitude of the problem, and captured onto the Regulatory Website.

Step 2: Communicate Findings

Communicate the findings of the investigation to:

- ❖ Water Services Authority (Formally inform both WSA Management as well as to Council and request compliance);
- ❖ Complainant;
- ❖ Other parties directly affected by the non-compliant activity (including DPLG/Provincial Government, DoH & SALGA), and
- ❖ Relevant DWAF staff (Regional, Cluster and National).

Step 3: Meet with WSA Management

This step includes meeting with Municipal Management and relevant Councillors to explain drinking water quality non-compliance and the repercussions of the action. This must always be done with the support of legislation and appropriate policy (Section 9 & 10 of Water Services Act (No. 108 of 1997)); Strategic Framework for Water Services and the Norms and Standards).

The primary purpose of this meeting would be to negotiate speedy rectification of the non-compliant action/s. The target of the negotiation would be to get the commitment from Municipal Management/Council for speedy rectification; it is therefore important that the outcomes from this meeting are recorded. Reasonable time frames for the WSA to become complaint must be agreed on.



If the outcome of this meeting is that there is a lack of capacity within the WSA which prevents them from delivering services according to promulgated Norms and Standards, then avenues must be investigated via DWAF's Directorate: Local Government Support or Directorate: Sector Development or Municipal Support Programmes of DPLG. The National Regulator is then required to monitor these capacity building actions closely.

Step 4: Follow-up Investigation

An on-site follow-up investigation is required to be performed by DWAF, as the National Regulator shortly after the due date negotiated in Step 3. Findings are required to be documented, including dated photographs to emphasise the magnitude of the problem.

If the WSA is successful in resolving the problem, then a letter of acknowledgement must be issued to the Mayor and Municipal Management of the WSA. This positive action must also be captured on the Regulatory Information System. However, if the applied effort fails to meet the requirements of compliance, or if no effort was made to change the situation, the Regulator will implement one of the Step 5 options.

Step 5 (a): Stern Action I (Name and Shame)

DWAF, as the National Regulator, are to inform SALGA, DPLG, Provincial Government and National Treasury of the failure of the WSA to be compliant after an intensive negotiation stage, which was regulated in the spirit of co-operative governance.

In order to apply political and public pressure on the Authority to become compliant, the option of 'Name & Shame' may eventually need to be followed. It is, however, important that the WSA be informed of the intention and date of publishing in advance.

Proposed means of 'Name and Shame':

- ❖ Media articles and television documentaries: The responsible official and the Chief Directorate: Communication must ensure that the article or documentary is factual;
- ❖ National State of the Sector Report of Non-compliance: This report would list all non-compliant WSAs, including the extent of non-compliance.

Step 5 (b): Stern Action II (Financial Pressure)

If no satisfactory response is evident after Step 7, Financial Pressure may be applied with the assistance of National Treasury. A possible method could be the retention or holding back of capital funds (as contemplated in the Public Finance Management Act (No. 1 of 1999 as amended by No. 29 of 1999), and the Division of Revenue Act (No. 5 of 2004, promulgated annually). This step may include the imposing of a fine to the municipality which will be reported upon in the Annual WS Regulation Report.



Step 5(c): Stern Action III (Legal Action)

Legal Action is seen as a last resort, requiring documented evidence to prove that National Government has exhausted all means of co-operative governance before taking this step. The National Regulator should endeavour to avoid this step by negotiating and convincing Local Government of its responsibilities. However, as a contingency measure, DWAF (Water Services & Legal Services) must investigate strategies to deal with issues that cannot be solved by means of negotiations. This action may include the issuing of a Directive or Court Interdict.

Step 6: Provincial or National Government Intervention

Prior to this step, DWAF is required to liaise with Provincial Government regarding formal intervention. The initial responsibility of intervention rests with Provincial Government. If all listed avenues have been explored and yet the WSA fails to be compliant, then the Minister has to intervene according to Section 63 of the Water Services Act (No. 108 of 1997). This would require the Water Services function to be ring-fenced outside the financial parameter of the WSA and be managed by the Department of Water Affairs and Forestry. These interventions are required to be coordinated through provincial government and DPLG.

During these steps, the complainant must continuously be informed of the procedures and communications taking place.

At all stages of the intervention, DWAF, as the National Regulator, will ensure compliance with and alignment to the National Regulatory Strategy.

2.5.3 PROPOSED CAPACITY-BUILDING AND SUPPORTIVE MEASURES

Many WSAs in South Africa are overwhelmed by the mandated drinking water quality monitoring and management requirements and thus have difficulty in establishing priorities. The emphasis needs to be on continual improvement, with realistic goals and interim milestones.

Proposed capacity-building initiatives to support WSAs to implement effective Drinking Water Quality Management include:

- ❖ Simple protocols and implementation manuals indicating and prioritising step-by-step actions for effective Drinking Water Quality Management. All manuals should be available in a format and language that the WSA Operator can understand;
- ❖ On-site mentoring demonstrating the use of the implementation manuals by experienced staff from performing WSAs;
- ❖ The introduction of accredited Drinking Water Quality Management training courses for sector stakeholders, with particular emphasis on WSA Operation staff and DWAF Regional Office Water Services staff;



- ❖ Regional DWAF staff (Technical) to be trained to operate in technical advisory capacity. Technical staff are to operate in technical advisory capacity when requested or when regulatory investigations highlight shortcomings that require communication and rectification. Staff capacity in the DWAF Regional Offices may need to be increased to undertake this support function effectively;
- ❖ DWAF Regional Office Water Services staff assisting WSAs with the prioritisation of maintenance and refurbishment of water treatment infrastructure projects in their Integrated Development Plans, to ensure that these projects are eligible for Municipal Infrastructure Grant funding.

Capacity-building initiatives for Drinking Water Quality Management must be aligned with Local and Provincial Government capacity-building initiatives and grants.

3. INSTITUTIONAL ROLES AND RESPONSIBILITIES

Effective Drinking Water Quality Management requires an integrated approach with collaboration and commitment from all relevant stakeholders. DWAF, as the lead institution for the regulation of drinking water quality in South Africa, is required to provide sector leadership and interact with all key stakeholders to ensure the development and application of appropriate mechanisms for effective delivery of safe drinking water.

3.1 WATER SERVICES AUTHORITIES

The primary responsibility for ensuring the provision of safe drinking water rests with WSAs. WSAs have a legal responsibility to:

- ❖ Monitor the quality of drinking water provided to consumers;
- ❖ Compare the results to national drinking water standards; and
- ❖ Communicate any health risks to consumers and appropriate authorities.

as described in the regulations to the Water Services Act (No. 108 of 1997) *Compulsory National Standards for the Quality of Potable Water*.

WSAs also have a responsibility to regulate the quality of water supplied by Water Services Providers (WSPs).



3.2 THE DEPARTMENT OF WATER AFFAIRS AND FORESTRY

The Department of Water Affairs and Forestry (DWAF) is the national custodian of South Africa's water and forestry resources, and is the overall leader of the water sector. DWAF is primarily responsible for the formulation and implementation of policy and regulation governing the water sector. DWAF has the constitutional cooperative government responsibility to support and strengthen the capacity of local government, and to regulate local government to ensure effective performance of its duties. As sector leader, DWAF has ultimate responsibility for water services provided by local government and manages information to be used for support, monitoring, regulation and planning.

Role of National DWAF in Drinking Water Quality Management

At a strategic level, National DWAF regulates and supports the Drinking Water Quality Management function and is required to:

- ❖ Develop and maintain a national Drinking Water Quality Framework;
- ❖ Champion and direct sector awareness, collaboration and the alignment of activities;
- ❖ Manage information, including a sector database and information sharing system covering key aspects such as tracking WSA monitoring systems and drinking water quality data;
- ❖ Undertake evaluations to understand holistic Drinking Water Quality Management activities (include SWOT evaluations, infrastructure investment, Operation and Maintenance);
- ❖ Undertake periodic regulatory audits of the Drinking Water Quality data and management systems of the Water Services Authorities;
- ❖ Ensure availability and optimisation of resources within the water services sector (human, equipment, technical resources, funds);
- ❖ Facilitate adequate WSA budgetary allocations for Drinking Water Quality Management, and demonstrate *via* Case Studies the positive Net Present Value returns to WSAs of improved Operation and Maintenances resulting from effective Drinking Water Quality Management;
- ❖ Undertake proactive intervention where necessary (as Sector Regulator).

At a practical support level, National DWAF is required to:

- ❖ Develop appropriate, practical and sustainable technical support documents and tools to assist Drinking Water Quality Management;
- ❖ Facilitate sharing of lessons learned and information exchange of best practice within the sector (creation of a knowledgeable sector);
- ❖ Provide pragmatic, knowledgeable and proactive support to both WSAs and DWAF Regional Offices;
- ❖ Direct specialist technical support to WSAs where necessary;



- ❖ Trigger adequate WSA budgetary allocations to drinking water quality monitoring, and show via Case Studies the positive Net Present Value returns to WSAs of improved Operation and Maintenance resulting from Drinking Water Quality Management.

Role of DWAF Regional Offices in Drinking Water Quality Management

DWAF Regional Offices support the Drinking Water Quality Management function by:

- ❖ Providing support to WSAs/WSPs including:
 - Proactive technical Drinking Water Quality Management support;
 - Drinking water quality data management;
 - Access to DWAF laboratories for guidance in terms of analytical methods and good laboratory practice and commercial laboratories for routine sample analysis;
 - Assistance with training of WSA staff in Drinking Water Quality Management functions.
- ❖ Reviewing of Water Services Development Plans, to ensure that drinking water quality monitoring is included;
- ❖ Reviewing and responding to the national Drinking Water Quality Management database regarding the state of WSAs monitoring systems and water quality data;
- ❖ Undertaking Drinking Water Quality Management System Assessments of WSA's performance to guide the level of support required from Provincial & National Government;
- ❖ Undertaking Compliance/Regulatory Auditing and Assessments (including monitoring);
- ❖ Assisting in Lesson Sharing of Best Practices, and the facilitation of mentoring;
- ❖ Acting as default Lead Facilitator in initiating provincial Drinking Water Quality Management Task Teams and provincial Drinking Water Quality Management Fora.

Future **Catchment Management Agencies (CMAs)** will be responsible for water resource planning and management at the catchment level, including licensing of water use and discharges, monitoring abstractions and discharges, and overseeing land-use activities. The CMAs will also be responsible for the implementation of the National Monitoring Programmes which monitor resource quality at the catchment level.

The role of CMAs in resource protection as a preventative measure is particularly important in the cases of communities not yet served with potable water. DWAF Regional Water Quality Management Offices fulfill the role of the CMA where these are not yet established.



CMAs have an important role in protection of water resources, particularly in situations where communities are using untreated water for domestic purposes

3.3 OTHER KEY INSTITUTIONAL ROLES AND RESPONSIBILITIES

3.3.1 THE DEPARTMENT OF HEALTH

The Department of Health (DoH) supports the Drinking Water Quality Management function by:



- ❖ Collecting information on the incidence of waterborne diseases (for example, diarrhoea) and the use of this information to facilitate interventions;
- ❖ Being the lead 'early warning' authority and execution agents for medical intervention under emergency drinking water quality conditions.

At District Municipality and Metropolitan level, the Environmental Health Officers support the Drinking Water Quality Management function by assuming the primary responsibility for health and hygiene education related to water and sanitation services, and undertaking drinking water quality monitoring as a routine audit function at point-of-use. DoH drinking water quality monitoring will focus on health-risk related constituents, particularly indicators of faecal contamination.

3.3.2 THE DEPARTMENT OF PROVINCIAL AND LOCAL GOVERNMENT

The Department of Provincial and Local Government (DPLG) supports the Drinking Water Quality Management function by the allocation of Municipal Infrastructure Grant, Capacity Building Grant and Equitable Share to address areas of need impacting on effective Drinking Water Quality Management.

3.3.3 THE SOUTH AFRICAN LOCAL GOVERNMENT ASSOCIATION

The South African Local Government Association (SALGA) represents, renders a service to, and acts in the interests of 284 Municipalities in South Africa. In terms of Drinking Water Quality Management, SALGA will assist by the:

- ❖ Provision of a suitably constituted Municipal Drinking Water Quality Management Focus group to make constructive and critical comment on the Drinking Water Quality Framework and Regulatory Strategy;
- ❖ Participation in provincial Drinking Water Quality Management Task Teams.

3.3.4 CIVIL SOCIETY

Government is committed to promoting the active involvement of civil society in the provision of sustainable and affordable water services, including Drinking Water Quality Management. The Strategic Framework for Water Services (2003) notes that '*the most important and effective monitoring strategy for the sector is strengthening the voice of the consumer*'.

3.4 SECTOR COLLABORATION

One of the most critical aspects relating to achieving effective Drinking Water Quality Management in South Africa is ensuring effective and meaningful sector collaboration. The principle objective is to create an enabling and supporting environment which fosters collaboration, mutual support and learning. Given that the different provinces of South Africa, with their different areas of strengths



and weaknesses within the sector, require provincially based drinking water quality initiatives, a simple, provincially oriented sector collaboration methodology is presented.

The methodology is based on the effective participation of the sector *via* a provincial Drinking Water Quality Management forum and an associated Drinking Water Quality Management Task Team. The Task Team comprises senior representatives of at least the Regional DWAF office, Provincial Department of Local Government, Provincial Department of Health, and SALGA. The Task Team will be led by an agreed 'Lead Agent', with the default Lead Agent as DWAF Regional Office. An alternate Lead Agent may, however, be determined by the Task Team, dependant on the relative strengths and existing sector initiatives. Importantly, the Task Team should align the initiative with existing provincial sector collaborative initiatives, such as Masibambane or Project Consolidate. The Task Team's first requirement will be to initiate actions for a provincial Drinking Water Quality Management Forum that is inclusive of all sector stakeholders.

Thereafter, the Drinking Water Quality Management Task Team will use a simple stepwise objective oriented methodology to prioritise sector efforts and initiatives to improve Drinking Water Quality Management. The methodology will include Drinking Water Quality Management problem analysis, Drinking Water Quality Management objectives analysis, Drinking Water Quality Management options analysis and agreement, task allocation and roles and responsibility allocation, and ongoing review and continual improvement.

The above described output oriented sector collaboration *via* the use of provincial Drinking Water Quality Management Task Teams and provincial Drinking Water Quality Management forums will ensure:

- ❖ Identification and ranking of Drinking Water Quality Management needs;
- ❖ Identification of the mechanisms to ensure successful output;
- ❖ Identification of required specialist inputs;
- ❖ Linkage to Provincial Development Framework Plans and Integrated Development Plans;
- ❖ Provincial self-determination in ensuring an appropriate provincial Lead Agent;
- ❖ The clear mapping of roles and responsibilities amongst stakeholders in each province;
- ❖ Raised Drinking Water Quality Management awareness and sector involvement.



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ANNEXURE 1: LIST OF ABBREVIATIONS

CBG	Capacity Building Grant
CMA	Catchment Management Agency
CMF	Catchment Management Forum
DoH	Department of Health
DLG	Department of Local Government
DPLG	Department of Provincial and Local Government
DWAF	Department of Water Affairs and Forestry
DWQ	Drinking water quality
DWQM	Drinking Water Quality Management
MIG	Municipal Infrastructure Grant
NWA	National Water Act
NWRS	National Water Resources Strategy
SALGA	South African Local Government Association
SANS	South African National Standard
WSA	Water Services Authority
WSDP	Water Services Development Plan
WSP	Water Services Provider

**ANNEXURE 2: MEMBERS OF THE DWQM TASK AND DRAFTING TEAMS**

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