

GOVERNMENT NOTICES GOEWERMENTSKENNISGEWINGS

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 1242

28 December 2007



SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Nature Conservation

registered by Organising Field 01, Agriculture and Nature Conservation, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later than 1 February 2008**. All correspondence should be marked **Standards Setting – Nature Conservation** and addressed to

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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:**National Certificate: Natural Resource Management: Terrestrial**

SAQA QUAL ID		QUALIFICATION TITLE	
59949		National Certificate: Natural Resource Management: Terrestrial	
ORIGINATOR		PROVIDER	
SGB Nature Conservation			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	1 - Agriculture and Nature Conservation	Nature Conservation	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	144	Level 5	Regular-Unit Stds Based

This qualification does not replace any other qualification and is not replaced by another qualification.

PURPOSE AND RATIONALE OF THE QUALIFICATION**Purpose:**

The qualification addresses competencies required for supervision, leadership and managerial positions within a conservation environment enabling qualifying learners to access opportunities for further management development and training in the Nature Conservation environment.

Learners qualifying against this qualification will also play an important role in the management of conservation areas through community liaison, in order to facilitate the understanding of conservation/ environmental issues and promote compliance with conservation legislation.

After successful completion of this qualification, learners will be able to:

- Manage available resources at operational level.
- Enforce compliance with relevant conservation legislation.
- Manage the workplace at an operational level.

Rationale:

Nature Conservation is a highly regulated sector tasked with the protection and utilization of our natural resources and cultural heritage within natural areas; whilst ensuring, controlling and managing access to this environment.

The importance of Nature Conservation resides in the sustainable utilisation and conservation of the natural environment in relation to the following:

- Bio-Diversity.
- Ethical.
- Religious/spiritual.
- Socio-psychological.
- Education.
- Culture and heritage.
- Tourism.

- Recreation.

The utilisation of our natural resources protected and managed by Nature Conservation, is a main tourism attraction and thus contributes significantly to the country's foreign exchange earnings and the marketing of South Africa as a tourism destination.

A variety of organisations contributes to and operates within this sector, including:

- A variety of National departments.
- National, Provincial and Local Conservation Authorities.
- Conservancies and NGO's.
- Private Game and/or Nature Reserves including private game lodges.

The sector, by its very nature, requires the operational implementation of the legislative frameworks protecting and guarding our natural heritage and this takes place in three main operational focus areas contributing to what is commonly referred to as area integrity, namely:

- Enforcement of legal requirements in relation to the protection of bio-diversity and natural resources by the application of appropriate legislation.
- Resource management techniques used in the mitigation of threats and human impact on natural resources and biodiversity.
- Physical infrastructure construction and maintenance as it relates to the infrastructure necessary to facilitate and maintain sustainable activities within the conservation environment.

These three main operational focus areas reflected in the qualification, define the main operational and vocational objectives across the career path resulting from this qualification and related qualification stream.

The skills and competencies gained in the NQF Level 5 qualification enables the qualifying learner to take up the role of conservation supervision or management in the sector in the following positions:

- Principal Field Range/Sergeant.
- Assistant Section Ranger/Assistant Reserve Manager.
- Nature Conservator.

The acquisition of advanced competencies is required by the sector in order to meet legislative and operational requirements. The main objective of the protection and sustainable utilisation of our natural resources is thus maintained through the development of higher-level competencies associated with effective nature conservation operations. The requirements of individuals aspiring to advance in the sector are also addressed in terms of personal growth and job advancement opportunities.

The positions associated with the qualification are pitched at a level between operations and senior management. This translates into supervision; mentoring and leadership; and the implementation of strategies and interventions for specific key operational focus areas.

RECOGNIZE PREVIOUS LEARNING?

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LEARNING ASSUMED IN PLACE

It is assumed that learners accessing this qualification are competent in:

- Communication at NQF Level 4.

- Mathematical Literacy at NQF Level 4.

Weapons utilization:

Where an individual utilize weapons within the area of operation it is required that the learner must be in possession of the relevant SASSETA weapons unit standard applicable to the particular weapons utilized in the operational environment.

It is required that learners utilizing weapons in the operational environment must complete the elective:

- Handle firearms safely and efficiently NQF Level 5, 4 Credits.

Other operational requirements:

It is acknowledged that not all Nature Conservation environments (for example in the Kalahari) will conduct veld burn operations as part of operational requirements.

Where veld burn operations are practiced in the operational environment the following two unit standards are prescribed from the elective component:

- Implement veld burn operations NQF Level 5, 7 Credits.
- Control soil erosion NQF Level 5, 5 Credits.

Recognition of Prior Learning:

This Qualification can be achieved wholly or in part through the Recognition of Prior Learning and the Qualification may be granted to learners who have acquired the skills and knowledge without attending formal courses providing they can demonstrate competence in the outcomes of the individual Unit Standards as required by the Fundamental, Core and Elective areas stipulated in the Qualification and by the Exit Level Outcomes.

An RPL process may also be used to credit learners with Unit Standards in which they have developed the necessary competency as a result of workplace and experiential learning.

RPL may also be used by learners, who are not in possession of a GETC or equivalent qualification, to gain access to the Qualification.

Learners submitting themselves for RPL should be thoroughly briefed prior to the assessment, and may be required to submit a Portfolio of Evidence in the prescribed format to be assessed for formal recognition. While this is primarily a workplace-based Qualification, evidence from other areas of endeavour may be introduced if pertinent to any of the exit level outcomes.

Access to the Qualification:

- There is open access to any learner who complies with the learning assumed to be in place or equivalent competencies.

QUALIFICATION RULES

This qualification is made up of Fundamental, Core and Elective unit standards and a minimum of 144 Credits is required to complete the qualification.

Fundamental component:

- All unit standards totalling 25 credits are compulsory.

Core component:

- All unit standards totalling 101 credits are compulsory.

Elective component:

- A minimum of 18 credits from the Elective component is required.

EXIT LEVEL OUTCOMES

1. Manage available resources at operational level.
2. Enforce compliance with relevant conservation legislation.
3. Manage the workplace at an operational level.

The qualification addresses the following Critical Cross-Field Outcomes as embedded in the Exit Level Outcomes and Associated Assessment Criteria of the qualification:

Communicate effectively:

- Effective communication is enabled through the maintaining of relevant communication as per organisational requirements. Exit Level outcome 3, Assessment Criteria 3.2.

Identify and solve problems:

- Problems are identified and solved in the application of Nature Conservation Management. Exit Level outcome 3, Assessment Criteria 1, 2 and 3.

Collect, analyse, organise, and critically evaluate information:

- Information is collected analysed, organized and evaluated in the performing of available resources management at operational level. Exit Level outcome 1, Assessment Criteria 1, 2 and 3.

Work in a team:

- Teamwork is supported in the operational environment and the execution of Conservation Resources Management responsibilities. Exit Level Outcome 1. Assessment Criteria 1, 2 and 3. Exit Level Outcome 3. Assessment Criteria 1, 2 and 3.

Maintain effective working relationships:

- The maintaining of effective working relationships is supported in the enforcing of conservation compliance. Exit Level Outcome 2, Assessment Criteria 1, 2, 3, and 4.

Use of Science and technology:

- The use of Science and Technology is supported by the use of relevant technology employed in the undertaking of patrols. Exit Level outcome 2. Assessment Criteria 1, 2, 3, and 4, as well as the maintaining of infrastructure. Exit Level outcome 3. Assessment Criteria 3.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

1.1 Resource management action plans, as well as long-term routine resource conservation tasks are implemented, to ensure that the integrity of a conservation area is maintained according to legislative and organisational requirements.

Range:

- Catchment areas, plant communities, animal populations.

1.2 Integrated resource management plans are implemented within context of regional requirements.

Range:

- Communities, Catchment management, ecological corridors, transfrontier conservation areas; quarantine zones.

1.3 Effective plant and animal management is demonstrated as it applies to organisational requirements and operational needs.

Associated Assessment Criteria for Exit Level Outcome 2:

2.1 Routine patrols are undertaken to enforce compliance with legislation as it applies to the operational environment.

Range:

- Patrols could include foot patrols, vehicle patrols, boats or patrols by bicycle.

2.2 Conservation Compliance is enforced through the taking of necessary action appropriate to the operational requirements.

Range:

- Legislative compliance and issues relating to discipline including anti-poaching actions.

2.3 Colleagues and the general public are given information designed to enhance understanding of conservation objectives.

2.4 The meeting of the requirements for appointment as a peace officer is demonstrated.

Associated Assessment Criteria for Exit Level Outcome 3:

3.1 Personnel resources are planned and deployed to manage and maintain area integrity and conservation requirements according to operational needs and organisational requirements.

3.2 Workplace operations are managed and maintained through the use of clear instruction and reporting.

Range:

- Verbal and written instruction and reporting as it relates to legal enforcement, resource management and physical infrastructure maintenance.

3.3 Infrastructural elements are constructed and maintained according to operational requirements in order to ensure area integrity.

Range statement:

- Construction and maintenance includes but is not limited to reservoirs, water provision, paths, tracks, road networks, wildlife fences, vehicles, erosion works.

3.4 Conservation measures are implemented according to operational requirements.

Range:

- Support to senior staff in terms of interventions such as veld burn operations, measures for water provision, soil erosion, monitoring and evaluation of wildlife populations and plant communities in support of conservation objectives.

Integrated Assessment:

Assessment practices must be open, transparent, fair, valid, and reliable and must ensure that no learner is disadvantaged in any way whatsoever. For this purpose, an integrated assessment approach is incorporated into the Qualification.

Learning, teaching and assessment are inextricably aligned. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the unit standards should be integrated through the practical application of sales and services in a Nature Conservation environment.

Assessment of the communication, language, literacy and numeracy should be conducted in conjunction with other aspects and should use authentic Nature Conservation sales and services contexts wherever possible.

A variety of methods must be used in assessment and tools and activities must be appropriate to the context in which the learner is working. Where it is not possible to assess the learner in the workplace or on-the-job, simulations, case studies, role-plays and other similar techniques should be used to provide a context appropriate to the assessment.

The term 'Integrated Assessment' implies that theoretical and practical components should be assessed together. During integrated assessments the assessor should make use of formative and summative assessment methods and assess combinations of practical, applied, foundational and reflective competencies.

Assessors and moderators should make use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Assessment should ensure that all Specific Outcomes, Embedded Knowledge and Critical Cross-Field Outcomes are evaluated. The assessment of the Critical Cross-Field Outcomes should be integrated with the assessment of Specific Outcomes and Embedded Knowledge.

It is required that learners are able to arrange for assessment in an appropriate natural environment.

INTERNATIONAL COMPARABILITY

The diversity of the South African Nature Conservation environment as well as the shift in our Nature Conservation approach through integration of conservation areas and community involvement enables comparison with countries following similar approaches. The challenge of selection however resides in the fact that direct comparison needs to consider a number of best practices internationally to make provision for the diversity within our own operational conservation landscape.

The approach followed to select qualifications for comparison was therefore to not approach comparison from a singular "Qualification to Country" perspective but to attempt research and finally select programmes and training offered and recognised across countries. This in particular from the perspective that countries such as Tanzania, Brazil, Argentina, Australia and Canada all offer some components of best practice which can be applied within the diversity of the South African Nature Conservation sector.

Such a programme was identified as offered by the Arlington based "The Nature Conservancy" (Virginia USA) with support from the University of Florida's School of Natural Resources and Environment, a programme offered in a number of countries through joint initiatives.

The second qualification selected was the Level 5 Certificate in Conservation and Land Management registration number RTD 50102 as per the Australian Qualifications Framework - Selected as its Level 2 equivalent (RTD 20102) and Level 4 (RTD 40102) was used for initial comparison for qualifications within this qualification stream. The added benefit of comparison here is thus broader than a single qualification as it essentially enables the comparison of the overall qualification streams across qualifications making up the envisaged learning pathway.

In support of the decision to utilise RTD 50102, it must be noted that Australia offers best practices in terms of similarity of habitat as Australia deals with localized bio-diversity systems, a conservation focus very similar to the localized South African biomes. These include terrestrial and marine ecological patterns, tableland plateaus, rainforests and barrier reefs where the tropical lowland rainforest is biogeographically the oldest in the world.

In order to also obtain an African perspective the qualification was compared with the Diploma in Wildlife Management offered by the College of African Wildlife Management in Tanzania. The College has training in access of 4000 Wildlife Managers in 28 African Countries.

The Certificate in Natural Areas Management as offered by The Nature Conservancy via a worldwide office servicing and involved in Nature Conservation projects in 50 States across America and more than 30 Countries.

These include:

- Asia Pacific Region: Australia, China, Indonesia, Pacific island countries.
- Mesoamerica and Caribbean Region: Bahamas, Costa Rica, the Dominican Republic, Guatemala, Jamaica, Panama and the Virgin Islands.
- Pacific North Region: Alaska, Canada and Hawaii.
- South American Region including the Amazon, Chile and Peru.
- Use across the United States of America is obviously very broad.

The Learning Programme incorporates the following main focus areas:

- Conservation Site Assessment and Planning.
- Management of Conservation diversity and integrity.
- Soil erosion management.
- Diversity restoration.
- Plant management and invasive plant control practices.
- Animal management including pest species and pesticide application.
- Protection of ecosystems across boundaries.
- Resource management.
- Ecosystem management.
- Visitor and volunteer management in Natural Areas.
- Poaching.
- Off-road vehicle use.

- Fire Fighting.

When compared with the core of the envisaged qualification the following areas compare favourably:

- Conservation management planning.
- Animal Management.
- Plant Management.
- Management of area integrity.
- Catchment management.
- Conservation compliance.
- Conservation understanding.

Whilst the following elective standards also align within the South African context:

- Veld burn operations (Fire Fighting).
- Soil erosion.
- Operate and maintain vehicles in conservation areas.

The envisaged qualification distinguishes itself from the international approach through the inclusion of Conservation Ethics and weapons handling skills as well as the obvious emphasis on HIV/AIDS, teamwork and communication skills specific to our training and development needs. Social issues and road maintenance also did not feature in the international qualification, again enabling the addressing of specific local requirements.

The Level 5 Certificate in Conservation and Land Management registration number RTD 50102 is offered via TAFE in Tasmania and aligns to 1400 notional hours or roughly 140 credits if compared to the envisaged qualification.

Ten units of competency must be completed in order to obtain the qualification. Selection can be made from a predetermined list of units or learning areas.

NOTE: Areas printed in *Italic* compares with the envisaged Nature Conservation: Conservation Resources Management NQF Level 5.

Areas for selection include:

- Collect and Classify plants.
- Conduct Biological Surveys.
- Manage Parks and Reserves.
- Plan River Restoration works.
- Implement Plans of Management.
- Manage Environmental Performance.
- Design a Natural Area Restoration project.
- Plan Erosion and Sediment Control measures.
- Assess Applications for Legislative compliance.
- Develop a management plan for a designated area.
- Develop Conservation Strategies for Cultural Resources.
- Conduct field research in *Natural* and Cultural Resources.
- Define the Pest problem in a regional or broader context.
- Manage machinery and equipment.
- Plan burning activities for natural and cultural resource management.
- Conduct comprehensive Inspection of Park facilities.
- Provide specialist advice to clients.
- Establish and maintain OHS Programmes.

The South African qualification provides alternative focus areas such as:

- Manage area integrity.
- Construct and maintain infrastructure.
- Handle fire-arms safely and efficiently.
- Enforce conservation compliance.
- Understand and develop conservation ethics
- Assist with water provision.
- Plan the construction, monitor and maintain wildlife fences.
- Construct paths/tracks and road networks.
- Operate and maintain a vehicle in conservation areas.
- Manage cultural heritage resources in conservation areas.

The Diploma in Wildlife Management from the College of African Wildlife Management (Tanzania) includes the following focus areas:

Note: Areas printed in *Italic* compares with the envisaged Nature Conservation: Conservation Resources Management NQF Level 5.

- Wildlife Management: Concepts and Techniques.
- Environmental Impact Assessment.
- Community Conservation.
- Protected Area Planning.
- Wildlife Utilisation.
- Financial and Materials Management for Conservation.
- Advanced Fire-arms.
- Administration for Conservation.
- Conservation Education and Training Skills.
- Wildlife Law Enforcement.
- Wildlife Ecology.
- Resource Inventory: Mammals/birds/fish/amphibians/reptiles/plants/invertebrates
- Rangeland ecology and Management.
- Statistics analysis.
- Protected area infrastructure management.
- Managing tourism in protected areas.

Conclusion:

The envisaged qualification compares very well with the observed best practices in terms of the TAFE and The Nature Conservancy programmes as well as the Diploma in Wildlife Management in Tanzania, in particular within the operational areas of Conservation, animal and plant management.

Similarity of competencies associated with the two qualifications selected for comparison is clearly identifiable but in some instances the South African qualification provides a somewhat broader scope of choice to meet South African Nature Conservation requirements in particular for personal development (Workplace communication skills, research, ethics, HIV/Aids, Staff rosters and social issues).

Construction and maintaining of infrastructure, weapons handling, water provision and vehicle maintenance are emphasised in the South African qualification to address specific industry and occupational needs from a South African perspective. A very similar focus area in terms of infrastructure maintenance and weapons handling is observed in the Tanzanian qualification perhaps emphasising alignment in terms of specific needs within the African conservation environment.

It is clear from the comparison that a similar approach perhaps with slightly different focus areas to provide for our unique requirements are followed and that the main areas of competence shared amongst the three qualifications are certainly on par.

ARTICULATION OPTIONS

This Qualification provides the following articulation opportunities:

Horizontal articulation:

- National Certificate: Ecotourism Management, NQF Level 5.
- National Certificate: Nature Conservation, NQF Level 5.
- National Higher Certificate: Nature Conservation, NQF Level 5.
- ID 20153: National Certificate: Conservation: Fisheries Resource Management, NQF Level 5.

Vertical articulation:

- National Diploma Ecotourism Management, NQF Level 6.
- National Diploma: Nature Conservation, NQF Level 6.
- Bachelor of Arts: Conservation: Tourism and sustainable development, NQF Level 6.

MODERATION OPTIONS

• Anyone moderating assessment of a learner, against this Qualification must be registered as a moderator with the relevant ETQA, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

• Any institution offering learning that may enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

Assessment and moderation of assessment may be overseen by the relevant ETQA according to the policies and guidelines for assessment and moderation of that ETQA, in terms of agreements reached around assessment and moderation between various ETQAs (including professional bodies), and in terms of the moderation guideline detailed immediately below.

• Moderation must include both internal and external moderation of assessments at all exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual Unit Standards as well as the integrated competence described in the Exit Level Outcomes of the Qualification.

• Anyone wishing to be assessed against this Qualification may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the relevant ETQA, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

Anyone assessing a learner, against this Qualification must be registered as an assessor with the relevant ETQA, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

For an applicant to register as an assessor or moderator of this Qualification the applicant needs:

- To be declared competent in all the outcomes of the National Assessor Unit Standards.
- To be competent in the outcomes of this Qualification.

NOTES

Where a learner is involved in the enforcement of conservation compliance it is assumed and recommended that the most appropriate of the provided weapons unit standards have been completed to ensure that the learner meets requirements of the Firearms Control Act (No 60 of 2000) and the Firearms Control Amendment Act. (No 43 of 2003).

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	8662	Analyse and communicate workplace data	Level 5	5
Fundamental	8647	Apply workplace communication skills	Level 5	10
Fundamental	8648	Demonstrate an understanding of professional values and ethics	Level 5	4
Fundamental	7859	Lead and manage teams of people	Level 6	6
Core	253965	Apply basic conservation management planning	Level 5	4
Core	253961	Apply protected area management planning	Level 5	4
Core	8368	Construct and maintain infrastructure	Level 5	12
Core	253962	Demonstrate an understanding of indigenous plant management	Level 5	15
Core	253971	Demonstrate identification and application of indigenous plant species protection	Level 5	6
Core	253968	Develop and apply conservation ethics	Level 5	4
Core	253973	Enforce conservation compliance	Level 5	5
Core	253959	Implement integrated catchment management planning	Level 5	4
Core	253964	Manage area integrity	Level 5	12
Core	253958	Manage cultural heritage resources in the field	Level 5	5
Core	253969	Monitor the presence or absence of wild animal species	Level 5	15
Core	253957	Monitor wild animal populations	Level 5	15
Elective	8591	Analyse and understand social issues	Level 4	4
Elective	253956	Develop and maintain a staff roster	Level 4	3
Elective	253955	Assist with the provision of water in a protected area	Level 5	5
Elective	253963	Construct paths/tracks and maintain road networks	Level 5	5
Elective	253972	Control soil erosion	Level 5	5
Elective	253967	Facilitate conservation understanding	Level 5	4
Elective	253960	Handle firearms safely and efficiently	Level 5	4
Elective	9224	Implement policies regarding HIV/AIDS in the workplace	Level 5	4
Elective	253954	Implement veld burn operations	Level 5	7
Elective	253966	Operate and maintain a vehicle in conservation areas	Level 5	5
Elective	8663	Plan and conduct a research project	Level 5	6
Elective	253970	Plan the construction, monitoring and maintenance of wildlife fences	Level 5	5

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Implement veld burn operations***

SAQA US ID	UNIT STANDARD TITLE		
253954	Implement veld burn operations		
ORIGINATOR			PROVIDER
SGB Nature Conservation			
FIELD			SUBFIELD
1 - Agriculture and Nature Conservation			Nature Conservation
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	7

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Outline the provisions of the National Veld and Forest Fire Act (101 of 1998), along with Regulations pertaining to the Act, and relate these to the management needs of the conservation area.

SPECIFIC OUTCOME 2

Explain the rationale for a veld burn programme.

SPECIFIC OUTCOME 3

Implement the preparation phase for a veld burn.

SPECIFIC OUTCOME 4

Initiate a controlled fire.

SPECIFIC OUTCOME 5

Monitor the behaviour of the fire.

SPECIFIC OUTCOME 6

Extinguish the fire.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Assist with the provision of water in a protected area

SAQA US ID	UNIT STANDARD TITLE		
253955	Assist with the provision of water in a protected area		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Outline the ways in which the provision of water serves as an ecological management tool

SPECIFIC OUTCOME 2

Explain how water is provided at an artificial watering source.

SPECIFIC OUTCOME 3

Evaluate measures for water provision.

SPECIFIC OUTCOME 4

Implement ground water management measures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Develop and maintain a staff roster***

SAQA US ID		UNIT STANDARD TITLE	
253956		Develop and maintain a staff roster	
ORIGINATOR		PROVIDER	
SGB Nature Conservation			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Nature Conservation	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	3

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
9265	Develop and maintain a staff roster	Level 4	2	Will occur as soon as 253956 is registered

SPECIFIC OUTCOME 1

Explain the legal and organisational requirements pertaining to staff allocation.

SPECIFIC OUTCOME 2

Explain the legal and organisational requirements that pertain to leave.

SPECIFIC OUTCOME 3

Describe how business trends will influence staff allocation.

SPECIFIC OUTCOME 4

Maintain and manage a staff roster.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Monitor wild animal populations***

SAQA US ID	UNIT STANDARD TITLE		
253957	Monitor wild animal populations		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Estimate the size, and composition of wild animal populations.

SPECIFIC OUTCOME 2

Relate population characteristics to the resource base and its carrying capacity.

SPECIFIC OUTCOME 3

Determine trends in animal population demographics through periodic comparisons of census data.

SPECIFIC OUTCOME 4

Conduct field assessments of the physical appearance and condition, and certain behaviours of wild animals.

SPECIFIC OUTCOME 5

Act on out-of-norm situations regarding animal populations.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Manage cultural heritage resources in the field

SAQA US ID	UNIT STANDARD TITLE		
253958	Manage cultural heritage resources in the field		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Contextualise cultural heritage resource management within the Learner's operational area.

SPECIFIC OUTCOME 2

Assist in the development of a cultural heritage resources management plan.

SPECIFIC OUTCOME 3

Supervise the implementation of the cultural heritage site plan.

SPECIFIC OUTCOME 4

Monitor the implementation of the cultural heritage resource management plan.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Implement integrated catchment management planning

SAQA US ID	UNIT STANDARD TITLE		
253959	Implement integrated catchment management planning		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Demonstrate an understanding of catchment systems.

SPECIFIC OUTCOME 2

Discuss environmental problems that may be caused by human activity in catchment systems.

SPECIFIC OUTCOME 3

Implement corrective measures for environmental problems identified in consultation/collaboration with local communities and other stakeholders.

SPECIFIC OUTCOME 4

Monitor the water catchment area habitat.

SPECIFIC OUTCOME 5

Participate in a Catchment Management Forum.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Handle firearms safely and efficiently***

SAQA US ID		UNIT STANDARD TITLE	
253960		Handle firearms safely and efficiently	
ORIGINATOR		PROVIDER	
SGB Nature Conservation			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Nature Conservation	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Safely handle and maintain a firearm in accordance with prescribed rules, procedures and conditions.

SPECIFIC OUTCOME 2

Safely secure firearm in accordance with legal requirements.

SPECIFIC OUTCOME 3

Shoot a firearm in accordance with laid down rules, procedures and conditions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Apply protected area management planning***

SAQA US ID		UNIT STANDARD TITLE	
253961		Apply protected area management planning	
ORIGINATOR		PROVIDER	
SGB Nature Conservation			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Nature Conservation	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Plan the prioritised annual operational work activities as determined by the learner's operational protected area management plan.

SPECIFIC OUTCOME 2

Monitor planned operational activities.

SPECIFIC OUTCOME 3

Draft an annual report on the implementation outcomes of the annual operations plan.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Demonstrate an understanding of indigenous plant management***

SAQA US ID	UNIT STANDARD TITLE		
253962	Demonstrate an understanding of indigenous plant management		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Explain the associations between the flora and fauna within the protected area.

SPECIFIC OUTCOME 2

Explain the impact of management actions on the flora and fauna of the protected area.

SPECIFIC OUTCOME 3

Harvest plants according to management guidelines.

SPECIFIC OUTCOME 4

Propagate and re-introduce indigenous plants.

SPECIFIC OUTCOME 5

Apply basic plant monitoring techniques.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Construct paths/tracks and maintain road networks

SAQA US ID	UNIT STANDARD TITLE		
253963	Construct paths/tracks and maintain road networks		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
8369	Construct paths/tracks & maintain road networks	Level 5	5	Will occur as soon as 253963 is registered

SPECIFIC OUTCOME 1

Identify the legislative constraints that apply to the planning, construction and maintenance of tracks, paths and roads.

SPECIFIC OUTCOME 2

Plan the placement and construction of a track, path or road.

SPECIFIC OUTCOME 3

Explain the effect of soil type on the planning, placement, construction and maintenance of a track, path or road.

SPECIFIC OUTCOME 4

Apply basic principles of construction and maintenance applicable to tracks, paths and roads.

SPECIFIC OUTCOME 5

Maintain and operate basic road maintenance equipment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Manage area integrity***

SAQA US ID	UNIT STANDARD TITLE		
253964	Manage area integrity		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
8365	Manage area integrity	Level 5	12	Will occur as soon as 253964 is registered

SPECIFIC OUTCOME 1

Monitor animal and plant species in the field.

SPECIFIC OUTCOME 2

Establish good working relationships with local communities.

SPECIFIC OUTCOME 3

Maintain the ecological integrity and biodiversity of an area.

SPECIFIC OUTCOME 4

Identify potential ecological impacts as they are manifest in the wild environment.

SPECIFIC OUTCOME 5

Design and implement a security plan.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Apply basic conservation management planning***

SAQA US ID	UNIT STANDARD TITLE		
253965	Apply basic conservation management planning		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
8388	Apply basic conservation management planning	Level 5	4	Will occur as soon as 253965 is registered

SPECIFIC OUTCOME 1

Plan basic work activities in a conserved area.

SPECIFIC OUTCOME 2

Prioritise annual activities in a conservation area.

SPECIFIC OUTCOME 3

Execute planned work activities.

SPECIFIC OUTCOME 4

Report on the implementation and outcomes of the plan.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Operate and maintain a vehicle in conservation areas***

SAQA US ID		UNIT STANDARD TITLE	
253966		Operate and maintain a vehicle in conservation areas	
ORIGINATOR		PROVIDER	
SGB Nature Conservation			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Nature Conservation	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
8370	Operate and maintain a vehicle in conservation areas	Level 5	3	Will occur as soon as 253966 is registered

SPECIFIC OUTCOME 1

Exhibit skills for the safe operation of vehicles.

SPECIFIC OUTCOME 2

Exhibit competence in the towing of trailers, operation of auxiliary equipment and recovery vehicles.

SPECIFIC OUTCOME 3

Carry out pre-driving maintenance checks and routine maintenance tasks.

SPECIFIC OUTCOME 4

Inspect and report any more extensive faults to appropriate person.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Facilitate conservation understanding

SAQA US ID	UNIT STANDARD TITLE		
253967	Facilitate conservation understanding		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	4

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
8385	Facilitate conservation understanding	Level 5	4	Will occur as soon as 253967 is registered

SPECIFIC OUTCOME 1

Design, implement and evaluate a specific environmental education programme for children.

SPECIFIC OUTCOME 2

Design and implement an adult environmental education programme.

SPECIFIC OUTCOME 3

Design and implement an environmental education programme for visitors to a conservation area.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Develop and apply conservation ethics***

SAQA US ID	UNIT STANDARD TITLE		
253968	Develop and apply conservation ethics		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Identify values, situations and behaviour which have caused global environmental crises, and which can be addressed at local level.

SPECIFIC OUTCOME 2

Explain differing interests and values underlying local environmental conflict issues.

SPECIFIC OUTCOME 3

Develop a personal set of extrinsic and intrinsic values relating to ecosystems, including their bio-cultural components.

SPECIFIC OUTCOME 4

Distinguish differing interests and values underlying current practices in conservation.

SPECIFIC OUTCOME 5

Interact with people to address issues of conflict within a bioregional context.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Monitor the presence or absence of wild animal species***

SAQA US ID		UNIT STANDARD TITLE	
253969		Monitor the presence or absence of wild animal species	
ORIGINATOR		PROVIDER	
SGB Nature Conservation			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Nature Conservation	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Generate checklists of wild animal species in the operational area.

SPECIFIC OUTCOME 2

Evaluate species checklist recordings against their known and expected zoogeographical distribution ranges.

SPECIFIC OUTCOME 3

Determine trends and changes in the composition of animal species checklists.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Plan the construction, monitoring and maintenance of wildlife fences***

SAQA US ID	UNIT STANDARD TITLE		
253970	Plan the construction, monitoring and maintenance of wildlife fences		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Plan and erect a fence on or inside the boundaries of the protected area.

SPECIFIC OUTCOME 2

Initiate and implement a preparation phase to achieve determined objectives.

SPECIFIC OUTCOME 3

Construct and complete the fence according to specifications including electrification.

SPECIFIC OUTCOME 4

Patrol and maintain the fence on a regular basis.

SPECIFIC OUTCOME 5

Monitor the fence for effectiveness and undertake needed corrective actions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Demonstrate identification and application of indigenous plant species protection***

SAQA US ID		UNIT STANDARD TITLE	
253971		Demonstrate identification and application of indigenous plant species protection	
ORIGINATOR		PROVIDER	
SGB Nature Conservation			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Nature Conservation	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	6

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Identify indigenous plants and their uses.

SPECIFIC OUTCOME 2

Identify protected Indigenous plants within the operational area.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Control soil erosion**

SAQA US ID		UNIT STANDARD TITLE	
253972		Control soil erosion	
ORIGINATOR		PROVIDER	
SGB Nature Conservation			
FIELD		SUBFIELD	
1 - Agriculture and Nature Conservation		Nature Conservation	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
8371	Control Soil Erosion	Level 5	5	Will occur as soon as 253972 is registered

SPECIFIC OUTCOME 1

Identify the causes of soil loss due to erosion.

SPECIFIC OUTCOME 2

Identify the types, extent and intensity of soil loss due to erosion.

SPECIFIC OUTCOME 3

Implement appropriate actions and construct suitable structures to minimise further soil erosion in the area of operation.

SPECIFIC OUTCOME 4

Monitor the impact and effect of the soil conservation management action.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Enforce conservation compliance**

SAQA US ID	UNIT STANDARD TITLE		
253973	Enforce conservation compliance		
ORIGINATOR	PROVIDER		
SGB Nature Conservation			
FIELD	SUBFIELD		
1 - Agriculture and Nature Conservation	Nature Conservation		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

This unit standard replaces:

US ID	Unit Standard Title	NQF Level	Credits	Replacement Status
8366	Enforce conservation compliance	Level 5	5	Will occur as soon as 253973 is registered

SPECIFIC OUTCOME 1

Apply appropriate local legislation and regulations and make necessary linkages to provincial, national and international legislation.

SPECIFIC OUTCOME 2

Comply with procedures with respect to collection and submission of evidence (CITES species).

SPECIFIC OUTCOME 3

Demonstrate self-management and interpersonal skills.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59949	National Certificate: Natural Resource Management: Terrestrial	Level 5	Draft - Prep for P Comment	