GUIDELINE FOR AUTHORISING THE USE OF WATER FOR AQUACULTURE

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CONTENTS

FIGURES

TABLES

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- The Aquaculture sector at large.

EXECUTIVE SUMMARY

South African Aquaculture, as a water-based sector, is poised to grow rapidly. DWAF is therefore obliged and mandated to consider the unique regulatory and facilitative nature of water usage for Aquaculture. It is also in a position to use the opportunity, provided by Aquaculture, to contribute towards achieving the objectives of the National Water Act, 1998 (Act no. 36 of 1998) through integrated and sustainable utilisation of water resources to address socio-economic development, food-security, human resource development and equitable access to water and the water-based economy. To ensure that DWAF is prepared and equipped to deal with these obligations and opportunities, this guideline outlines the procedures, which are to be followed in the authorisation of water use for Aquaculture purposes.

Although the guideline itself is not legally binding, it provides guidance and direction with regards to the lawful use of water for Aquaculture. This guidance is based on principles of equity, participation and sustainability.

The guideline is intended for use by all stakeholders in the Aquaculture sector, including Departmental officials. Used correctly, this guideline will simplify the authorisation process and contribute greatly to lawful and sustainable water usage in Aquaculture.

The guideline is divided into various sections which contain the chronological steps or stages towards gaining approval for the use of water in Aquaculture. Each of these stages contains an explanation of the underlying legislation, nature of the required approach and clarity on the outcome. Within this, the information requirements, responsibilities of the applicant and responsibilities of DWAF are illustrated.

The stages are:

- Stage 1 which defines the steps that are required towards obtaining access to Government Waterworks for Aquaculture. These steps include reference to the required Public Private Partnership (PPP) process, which is regulated by National Treasury.
- Stage 2 in which the identification of the relevant water uses of the Aquaculture activity and determination of which authorisation types are applicable to the various water uses is undertaken.
- Stage 3 which deals with the standard license application process that is required for the licensing of certain water uses in Aquaculture. Furthermore, it provides guidance on additional information requirements, which are specific to Aquaculture.
- Stage 4 which provides for the evaluation of a license application for the use of water for Aquaculture and guidance as to the general and specific conditions under which such licenses should be issued.

This guideline has been developed as a tool for the Aquaculture sector and will assist DWAF in regulating and facilitating the growth of a responsible Aquaculture sector.

ACRONYMS

AASA	Aquaculture Association of Southern Africa
BEE	Black Economic Empowerment
CMA	Catchment Management Agency
DDG:NWRI	Deputy Director General: National Water Resource Infrastructure
DEADP	Department of Environmental Affairs and Development Planning
DEAT	Department of Environmental Affairs and Tourism
DEAT:MCM	Department of Environmental Affairs and Tourism - Marine and Coastal Management unit
DoA	Department of Agriculture
DWAF	Department of Water Affairs and Forestry
EIA	Environmental Impact Assessment
GG	Government Gazette
GN	Government Notice
HDI	Historically Disadvantaged Individual
MLRA	Marine Living Resource Act, 1998 (Act No. 18 of 1998)
MT	Metric Ton
NEM:BA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NWA	National Water Act, 1998 (Act No. 36 of 1998)
NWRI	National Water Resource Infrastructure
PPP	Public Private Partnerships
RQO	Resource Quality Objectives
SMME	Small, Medium and Micro Enterprise

GLOSSARY OF TERMS

In this document, unless the context indicates otherwise, any word, phrase or expression to which a meaning has been assigned in the National Water Act, 1998 (Act No. 36 of 1998), shall have that meaning, and -

1) **"Allocatable water quality"** means the maximum worsening change in any water quality attribute away from its present value that maintains it within a pre-determined range (typically management objectives) reflecting the desired future state. If the present value is already at or outside the pre-determined range, this indicates that none is accessible and that either rehabilitation of the resource and/or reduced pollution loads relating to the affected attribute(s) is necessary. The attributes may be quantified by water quality objectives, criteria or targets (e.g. in-stream or in- aquifer resource quality objectives, or a target water quality range or criteria). These may be expressed in terms of concentrations or loads (i.e. linked to water quantity, and flow in particular).
2) **"Aquaculture"** means the propagation, improvement, trade or rearing of aquatic organisms (plant and animal) in controlled or selected aquatic environments (fresh, sea or brackish waters) for any commercial, subsistence, recreational or other public or private purpose.
3) "**Aquaculturists**" means a person who practises Aquaculture as defined in Section 2 of this policy.
4) "**Basic human needs**" means that component of the Reserve required to satisfy basic human needs by securing a basic water supply, as prescribed under the Water Services Act, No. 108 of 1997, for people who are now or who will, in the reasonably near future, requiring water.
5) "**Best Management Practise**" means the application of measures and aspects of management to achieve the best possible outcome in all instances.
6) "**Biodiversity**" means the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and also includes diversity within species, between species, and of ecosystems;
7) "**Black Economic Empowerment**" is defined as an integrated and coherent socio-economic process that directly contributes to the economic transformation of South Africa and brings about significant increases in the number of black people who manage, own and control the country's economy, as well as significant decreases in income inequalities.
8) "**Cage culture**" means the practice of Aquaculture within a defined pen or net cage or structure that is contained within a larger water body.
9) "**Candidate species**" means specie that has been identified as having potential for the use in Aquaculture.
10) "**Capture fisheries**" means the harvesting of aquatic organisms from an environment in which no attempt has been made to manage or otherwise influence the organisms by containment, feeding or application of any husbandry techniques.
11) "**Catchment Management Agency**" means a body corporate that will fulfil the functions as contemplated in Part 2 of Chapter 2 of the NWA. Herein it is a Water Management Institution, which is a statutory body governed by a board representing the interests of users, local and provincial government and environmental interest groups. It manages all water resources within a deemed Water Management Area.
12) **"Catchment Management Strategy"** means the strategy that is developed by every catchment management agency (CMA) for the water resources within its water management area. A catchment management strategy sets out principles and procedures for allocating water to existing and prospective water users, taking into

account all matters relevant to the protection, use, development, conservation, management and control of water resources.

13) **"Combined water use authorisation"** means a water use authorisation that covers a range of different water uses.
14) "**Controlled activity**" means an activity having a detrimental impact on water resources as contemplated in Sections 37 and 38 of the NWA.
15) "**Co-operative governance**" means the process of governance (including regulation, facilitation etc.) between two or more governing bodies (e.g. Government Departments).
16) "**Crustacean**" means any of various predominantly aquatic arthropods of the class Crustacea, characteristically having a segmented body, a chitinous exoskeleton, and paired, jointed limbs.
17) "**Cumulative impact**" means the net resultant impact of two or more elements or activities exerting respective individual impacts. This is used in the context of an impact that in itself may not be significant but is significant when added to the impact of other activities.
18) "**Demographic**" means the adjective of or relating to demography, which is the study of the characteristics of human populations, such as size, growth, density, distribution, and vital statistics.
19) "**Dissemination**" means effective and equal distribution.
20) "**Environmental Impact Assessment**" means the process of collecting, organising, analysing, interpreting and communicating information that is relevant to a decision contemplated in Regulation 17 of NEMA in respect of the potential impacts of a proposed activity.
21) "**Equitable"** means marked by or having equity; just and impartial.
22) "**Equity**" means the state, quality, or ideal of being just, impartial, and fair.
23) "**Exotic species**" means a species that is not an indigenous species; or an indigenous species translocated or intended to be translocated to a place outside its natural distribution range in nature, but not an indigenous species that has extended its natural distribution range by natural means of migration or dispersal without human intervention.
24) "**Finfish**" means an aquatic vertebrate of the super class Pisces.
25) "**Fitness-for-use**" means the characteristics that are conducive to normal use (i.e. in terms of this policy it refers to the characteristics of water resources that allow for normal use).
26) "**Food security**" means the attainment of the minimum quantity of sustenance for maintenance of bodily functions and health.
27) "**Genetically modified**" means the resultant genome from the application of techniques of genetic engineering so that the genome contains one or more modified or alien genes.
28) "**Historical backlog**" means the state of certain demographic groups in South Africa caused by the previous political dispensation prior to democratisation in 1994.
29) "**Human resource**" means the collective worth (intellectual, spiritual and physical) of a person or people.
30) "**Hybridisation**" means to produce hybrids through crossbreeding of species to form DNA base pairs between complementary genetic regions of two strands of DNA that were not originally paired.
31) "**Industrial Aquaculture**" means Aquaculture that is practised at large scale, with large production volumes and continues and predictable outputs.
32) "**Mariculture**" means the practise of Aquaculture in the marine environment or an environment that replicates the marine environment.
33) "**Mollusc**" means any of numerous invertebrates of the phylum Mollusca, typically having a soft un-segmented body, a mantle, and a protective calcareous shell and including the edible shellfish and the snails.

34) "**Natural fisheries resources**" means the aquatic organisms in an environment in which no attempt has been made to manage or otherwise influence the organisms by containment, feeding or application of any husbandry techniques.
35) "**Non-consumptive**" means to use in a manner, which does not decrease the matter quantitatively or qualitatively.
36) "**Operational Policy**" means a document outlining the set of principles and ideals on which decision-making and implementation are based and clarifies the directorate's intent with regards to the relevant business area in relation to the National Water Act or other empowering legislative requirements;
37) "**Ornamental Aquaculture**" means the practise of Aquaculture for the provision of products that are used in an aesthetic manner only.
38) "**Past imbalances**" means the socio-economic disparity of certain demographic groups in South Africa caused by the previous political dispensation prior to democratisation in 1994.
39) "**Previously disadvantaged**" means the socio-political disadvantage of certain demographic groups in South Africa caused by the previous political dispensation prior to democratisation in 1994.
40) "**Principle"** means a statement providing guidance on what should be strived for, typically acknowledging an underlying values-based assumption.
41) "**Public Private Partnership**" means a commercial transaction between an institution and a private party in terms of which the private party –
    (a) performs an institutional function on behalf of the institution; and / or
    (b) acquires the use of state property for its own commercial purposes; and
    (c) assumes substantial financial, technical and operational risks in connection with the performance of the institutional function and/or use of state property; and
    (d) receives a benefit for performing the institutional function or from utilising the state property, either by way of:
        (i) consideration to be paid by the institution which derives from a revenue fund or, where the institution is a national government business enterprise or a provincial government business enterprise, from the revenues of such institution; or
        (ii) charges or fees to be collected by the private party from users or customers of a service provided to them; or
        (iii) a combination of such consideration and such charges or fees;
42) "**Redress**" the process of rectifying past socio-economic imbalances in certain demographic groups in South Africa (caused by the previous political dispensation prior to democratisation in 1994).
43) "**Registration"** means the process of notifying the Department of a water use and the Department capturing the water use details on the National registration system.
44) "**Resource Directed Measures**" means a strategy that has been developed to implement the Chapter 3 of the National Water Act, 1998 (Act No. 36 of 1998), and incorporates: (i) the establishment of the Reserve; (ii) the classification of the water resource; and (iii) the setting of Resource Quality Objectives.
45) "**Resource Quality Objectives**" means numerical and narrative descriptors of conditions that need to be met in order to achieve the required management scenario. They relate to: the Reserve; the instream flow; the water level; the presence and concentration of particular substances in the water; the characteristics and quality of the water resource and the instream riparian habitat; the characteristics and distribution of the aquatic biota; the regulation or prohibition of instream or land-based activities that may affect the quantity or quality of the water resource; and any other characteristic of the resource.
46) "**Shellfish**" means an aquatic animal, such as a mollusc or crustacean that has a shell or shell-like exoskeleton.
47) "**Socio-economic**" means of or involving both social and economic factors.
48) "**Source Directed Controls"** means measures that contribute to defining the limits and constraints that must be imposed on the use of water resources to achieve the

desired level of protection. They are primarily tools designed to control water use activities at the source of impact, through tools such as standards and the situation-specific conditions that are included in water use authorisations.

49) "**State Parties**' is any unit, department or administrative structure bought about by the South African Government and as further contemplated in Section 239 of the South African Constitution.

50) "**Structural elements of impoundments**" means all elements that ensure the continued existence and functionality of impoundments and include, pipes, valves, pumps, weirs, dam walls and other infrastructure.

51) "**Subsistence**" means just sufficient to maintain life.

52) "**Sustainable**" means the capability of continuation with minimal long-term effect on the environment.

53) **"Wastewater"** means water containing waste, or water that has been in contact with waste material.

54) "**Water-based economy**" means any economic sector or element, which is dependant on or linked to water resources.

55) "**Water quality"** means the physical, chemical, toxicological, biological (including microbiological) and aesthetic properties of water that determine sustained (1) healthy functioning of aquatic ecosystems and (2) fitness for use (e.g. domestic recreational, agricultural and industrial). Water quality is therefore reflected in (a) concentrations or loads of substances (either dissolved or suspended) or micro-organisms, (b) physico-chemical at-tributes (e.g. temperature) and (c) certain biological responses to those concentrations, loads or physico-chemical attributes.

SUPPORTING DOCUMENTS

This guideline is supported by the following documents:

- Department of Environmental Affairs and Development Planning (DEADP), Generic Environmental Best Management Practice Guideline for Aquaculture Development and Operation in the Western Cape, Edition 1
- DEADP, Guideline to the Authorisation Requirements for Aquaculture in the Western Cape, Edition 1
- Department of Water Affairs and Forestry (DWAF), Operational Policy for the Use of Water for Aquaculture, April 2006
- DWAF, A Guide to the Registration of Water Use under the National Water Act, First Edition, March 2000
- DWAF, Water Use Licence Assessment Process: Internal Guideline, 2007
- DWAF, External Water Use Licence Application Guideline, 2007 with specific reference to the following individual water use guidelines:
    - DWAF, Section 21(c) and (i): Authorisation Guidelines for the Water User, First Edition, 2006

1. INTRODUCTION AND BACKGROUND

The National Water Act, 1998 (Act No. 36 of 1998) (NWA) was promulgated to provide for fundamental reform of the law relating to water resources, recognising that water is a scarce and unevenly distributed national resource that belongs to all people. The NWA provides the Department of Water Affairs and Forestry (DWAF) with a mandate to protect, use, develop, conserve, manage and control South Africa's water resources in an integrated manner. Such integrated management of the resource depends *inter alia* on effective management of water quality, which in turn relies on managing both the resource and sources of pollution.

The South African Aquaculture sector is poised to contribute in a sustainable manner to rural development and poverty relief, and to large-scale economic development, diversification and export opportunities. The non-consumptive and integrated use of water for Aquaculture can be economically beneficial, can create Black Economic Empowerment (BEE); Small, Medium and Micro Enterprise (SMME); Public Private Partnerships (PPP); and skills development opportunities without expensive land reform and capitalisation. This development, however, depends on an accessible regulatory and facilitative framework to guide the sustainable utilisation of resources, to which the water resource is central. In this, the equitable intensification of Aquaculture must take place without undue impact on water resources, the fitness-for-use of water by other activities and the greater environment.

DWAF is obliged to consider the unique regulatory and facilitative nature of water usage for Aquaculture. It is also in a position to use the opportunity, provided by Aquaculture, to contribute towards achieving the objectives of the NWA through integrated and sustainable utilisation of water resources to address socio-economic development, food-security, human resource development and equitable access to water and the water-based economy. To ensure that DWAF is prepared and equipped to deal with these obligations and opportunities, this guideline outlines the procedures, which are to be followed by Aquaculture projects and DWAF officials in the authorisation (in terms of the NWA) of water use for Aquaculture purposes, in which Aquaculture is defined as the '*propagation, improvement, trade or rearing of aquatic organisms (plant and animal) in controlled or selected aquatic environments (fresh, sea or brackish waters) for any commercial, subsistence, recreational or other public or private purpose*[1]*'.*

The guideline provides guidance on the respective responsibilities of the applicants and Departmental officials in the process of authorising the use of water for Aquaculture and therefore sets the basis for a Management System. Undertaken correctly, this system will simplify the authorisation process and contribute to accountability and manageability in the Aquaculture sector. Through DWAF's assistance in the facilitation of water use authorisations for Aquaculture, this sector will become an important component of the water-based economy.

2. OVERALL STRUCTURE OF THE GUIDELINE

The guideline document is divided into the following main sections:

Sections 1 to 10 **Introductory Sections**
These sections provide background information on the purpose and goals of the guideline; they define the users, the principles and the overall approach.

[1] *Note that Aquaculture does not include capture fisheries (or fisheries), which entails the harvesting of aquatic organisms from an environment in which no attempt has been made to manage or otherwise influence the organisms by containment, feeding or application of any husbandry techniques. For further information on aquaculture activities, refer to the Operational Policy for Aquaculture Water Use, April 2006.*

Section 11	**Defining the Water Uses and Water Use Authorisation Types for Aquaculture** This section summarises all the applicable authorisations (in terms of the NWA), which have specific application to the authorisation of water use in Aquaculture.
Section 12	**Introduction to the Stages of the Authorisation Process** This section introduces the individual stages of the authorisation process that are dealt with in the following sections.
Section 13	**Stage 1** This section deals with the process that is required in establishing access to a Government Waterworks targeted for use in Aquaculture development.
Section 14	**Stage 2** This section deals with the determination of the water use authorisation types (as per the NWA) which may apply to a specific Aquaculture activity.
Section 15	**Stage 3** This section deals with the standard license application process that is required for the licensing of certain water uses in Aquaculture. Furthermore it provides guidance on additional information requirements, which are specific to Aquaculture.
Section 16	**Stage 4** This section deals with the evaluation of a license application for the use of water for Aquaculture and provides guidance as to the conditions under which such licenses should be issued.
Section 17	**Conclusion**

The guideline revolves mainly around the authorisation process contained in Sections 13 to 16, with most of the remaining sections being in support of this process. The authorisation process (made up of the respective Stages which are explained through Sections 13 to 16) is diagrammatically depicted in Figure 1 below.

3. PURPOSE AND GOALS OF THE GUIDELINE

The use of water for Aquaculture has the potential to impact water resources and the social-, economic-, and biophysical environment. To ensure the sustainability of a sector that is so reliant and closely linked to water resources, it is imperative that these water resources are protected, and that their utilisation is based on sound management, while ensuring equitable benefits to all. Such sound management of water resources used in Aquaculture can be achieved by the application of this guideline. In this regard the **primary purpose** of the guideline is the protection of water recourses given the expansion of the Aquaculture sector.

The use of water for Aquaculture involves multiple water uses as defined in Section 21 of the NWA for which various water use authorisations could apply. These multiple water uses and authorisation options complicate the process of authorisation, which defines the **primary goal** of the document as being the simplification of the authorisation process for Aquaculture water users and standardisation of the process for DWAF officials who have limited exposure to the technical nature of water use in Aquaculture.

This guideline, together with the Operational Policy for Aquaculture Water Use, will ensure that Government, through DWAF as custodian authority over water resources, can provide explicit direction and guidance regarding the use of water for Aquaculture, thereby creating an environment that is conducive to unlocking the potential of this water use in a sustainable manner. The guideline thus **aims** to streamline the process of authorisation by:

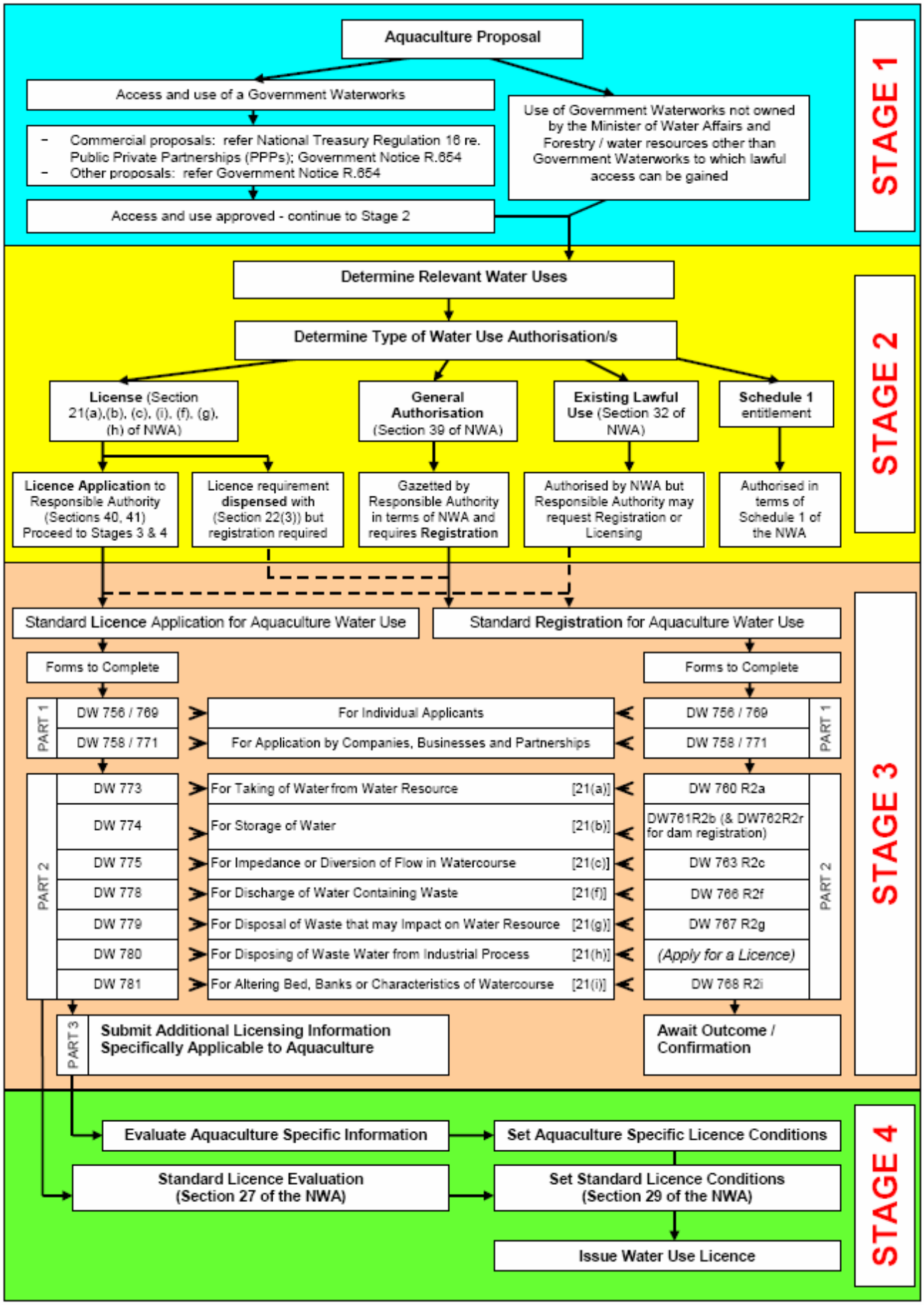

Figure 1: Diagrammatic Illustration of the Authorisation Process for the Use of Water in Aquaculture.

- Providing guidance on the process and procedures to be followed in applying for a water use authorization;
- Providing information that is required from the applicant at the various stages of the water use authorisation process; and,
- Providing guidance on the evaluation mechanisms and conditions under which an authorisation for the use of water for Aquaculture can be granted.

Meeting these purposes and goals will ensure that all role-players will have a clear guide to follow in the authorisation process.

4. DEFINING THE USERS OF THE DOCUMENT

The guideline essentially has three main user groups, these being:

- All participants in the Aquaculture sector who currently use water, or intend to use water in the future as part of an Aquaculture operation;
- DWAF and all of its officials who need to either deal directly with water use authorisations, but also those officials that are involved in diverse functions of water resource protection, management, allocation, planning etc; and,
- All other authorities that have a regulatory, facilitative or other function over Aquaculture. These authorities will use the guideline to ensure general cooperation and cooperative governance relating to Aquaculture.

5. LIMITATIONS

The guideline has the following limitations:

- It has no legal standing and it is prepared for use solely as a guideline in the water use authorisation process. Compliance with the prescriptions of the NWA, to which this guideline provides guidance, is however a legal requirement; and,
- There is no guarantee that the application of the guideline by the role-players will ensure that the obtaining and/or issuing of a water use authorisation will be any easier. Use of the guideline by both DWAF and the Aquaculture sector will nevertheless align the information/assessment requirements, improve transparency and assist in the evaluation process.

6. OVERARCHING PRINCIPLES

The overarching principles that dictate the approach in the guideline are as follows:

Equity: This principle ensures fairness to people and communities who do not have equitable access to natural resources and/or to social and economic goods. The equity principle is adopted by following the considerations in Section 27(1) of the NWA, which must be applied in the evaluation of individual water use authorisation applications.

Participation: This principle recognises that all interested and affected parties have a right to participate in the management of water resources. Participation includes meaningful, timely and representative consultation with interested and affected parties in order to arrive at effective and informed decision-making. The NWA as a whole, and in particular the water use

authorisation procedure, includes extensive provision for public consultation and stakeholder liaison.

Freedom of Information: The regulatory system provides for openness and transparency in decision-making in which information is available to the regulated community and the public.

Sustainability: The policies and strategies that underpin the NWA promote actions and practices that focus on conservation and sustainable use of the water resources, such that future generations have access to resources that are fit for use.

7. LEGISLATIVE CONTEXT OF THE GUIDELINE

This guideline contains official rules and instructions that direct the implementation of the requirements of the NWA regarding the authorisation of water use (for aquaculture purposes), and sets the way of implementing actions to achieve the objectives of the NWA and the Operational Policy for Aquaculture Water Use. It thus has no formal legal standing other than clarifying the legal requirements of the NWA.

Specific legislation for Aquaculture does not currently exist in South Africa, but all laws within the legal framework apply to the sector. Apart from the overriding Constitution, human rights, right to tenure, labour - and commercial laws, many facets of Aquaculture are governed by environmental and resource related legislation, which includes the NWA. This basket of legislation means that the use of water for Aquaculture, as entitled under the NWA, cannot stand separately from other legislative requirements. By default this emphasises the importance of cooperative and interdepartmental governance of the Aquaculture sector.

8. HARMONISATION WITH OTHER LEGISLATIVE APPROVALS

The aquaculture sector is subject to various authorisation processes, which fall outside of the NWA's ambit and DWAF's responsibility. Nevertheless DWAF (through the NWA) have an obligation towards cooperative government and interdepartmental cooperation, especially in terms of the resource based legislation. The main legislation (not exclusive) in terms of which Aquaculture activities require approval is:

- National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).
- National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEM:BA).

Other legislation that applies includes that of the Department of Agriculture (DoA), relevant provincial authorities and local government as illustrated in the Western Cape Department of Environmental Affairs and Development Planning *Guideline to the Authorisation Requirements for Aquaculture in the Western Cape*.

The approval of Aquaculture activities in terms of these Acts follow the processes so defined in each of the respective Acts. Nevertheless, the following points, but not limited to, should be considered to ensure that the process of water use authorisation is integrated with the approvals processes under these Acts (refer Stages 1 to 4):

- DWAF officials and stakeholders in the Aquaculture sector must recognize that Aquaculture activities with a production output of less than 10 tons per annum do not require an Environmental Impact Assessment (EIA) (as defined by the EIA Regulations of NEMA). Nevertheless, this does not exempt any Aquaculture activity from compliance

with any other legislation (such as the NWA and the NEM:BA).

- In the event of an EIA being required in terms of NEMA, DWAF officials should be aware of the requirement for the EIA and should state this as a condition of authorisation in terms of the NWA. Likewise, the authorities responsible for the EIA process must recognise the need for water use authorisations in terms of the NWA.
- In the event of an EIA being required, DWAF officials should take cognisance of the public participation process prescribed as part of the EIA process. This will allow consideration of any public concerns in terms of water resources during the authorisation of a water use.
- DWAF officials and stakeholders must take cognisance of the potential impacts posed to biodiversity (and eventually to the ecological integrity of water resources) caused by the farming or intended farming of alien or extra-limital aquaculture species as defined in NEM:BA.
- In all cases in which Aquaculture activities are being subjected to multiple approvals under different legislation, DWAF officials must ensure that they remain in contact and informed of the nature, progress and outcome of an approvals process that is being undertaken by another Department.
- Apart from compliance with the resource-based legislation, certain Aquaculture activities make (or propose to make) use of and depend on public (State) infrastructure and assets, which in certain instances are under the custodianship of the Departments of Public Works and Land Affairs. In this regard, DWAF must ensure close working relationships with these Departments.

9. APPLICABLE WATER USE AUTHORISATIONS

Water may be used subject to the permissions provided for in Section 22(1) of the NWA. These **permissible water uses** allow for entitlement of the use of water for Aquaculture (or for any other purposes) as follows, and are discussed in greater detail under Section 14.2 of the guideline:

- By means of being classified as a **Schedule 1** water use (as defined in Schedule 1 of the NWA);
- By virtue of the fact that it is an **Existing Lawful Use** (as defined and explained in Sections 32 to 35 of the NWA);
- By means of a **General Authorisation** (as defined and explained in Section 39 of the NWA).
- By means of the issuance of a **Licence** for water uses identified in Section 21 of the NWA (for which the application process has been described in Sections 41 to 42 of the NWA); and,
- By a Responsible Authority **dispensing** with the requirement for a licence if it is satisfied that the purpose of the NWA will be met by the grant of a licence, permit or other authorisation under any other law.

10. SYSTEMATIC FLOW OF THE AUTHORISATION PROCESS

It is the intention of this guideline to streamline the authorisation of the use of water for Aquaculture by providing clarity on the pathways of authorisation. In this regard the authorisation guideline is divided into four stages to provide clarity to the process. It is furthermore intended that each stage progress into the next without a “stop-start” motion from stage to stage. This can only be achieved if the guideline is followed diligently by the stakeholders in the Aquaculture sector and by the relevant DWAF officials at Regional level. The evaluation of licenses for the use of water for Aquaculture is a Regional Office responsibility, while various Directorates within the National Office provide specialist input and verification in terms of policy and regulation. The current delegated authority for

authorisation of water use through licenses is the Chief Director: Water Use.

11. STAGE 1: INITIATION

11.1 Purpose

The primary purpose of the first stage is to differentiate between access and use of Government Waterworks as opposed to water resource infrastructure owned by other organs of State and / or water resources located on private property to which an applicant has legal access. Secondary purposes of the stage include differentiating between commercial and non-commercial access and use of Government Waterworks by providing guidance on:

- The Public Private Partnership (PPP) process that is required in cases where proposed Aquaculture developments involve the commercial use of Government Waterworks and providing guidance on the information requirements with regards to entering into the abovementioned PPP.[2]
- Authorisations required in terms of Government Notice R. 654 of May 1964 for access to the works and introduction of fish or aquatic life.
- Any fatal flaws relating to later water use authorisation/s.

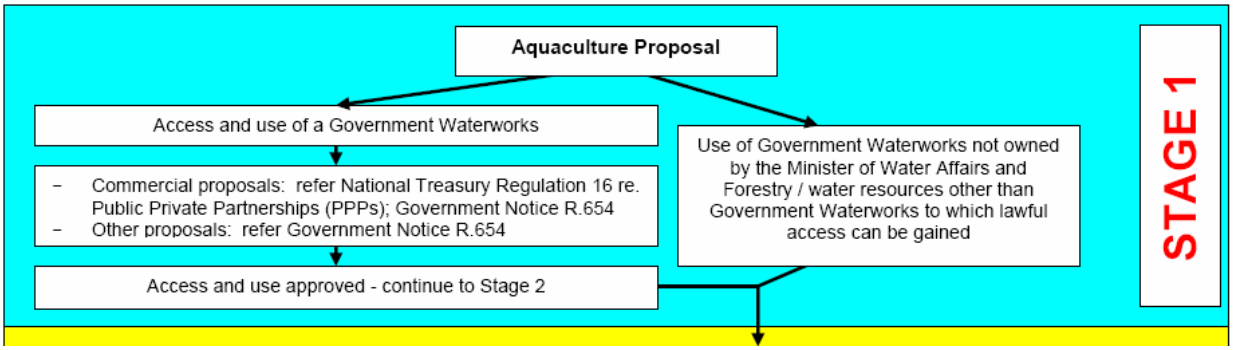

Figure 2: Diagrammatic Illustration of Stage 1.

11.2 Guidelines

In the past, Aquaculture activities have not been permitted in cases where such activities required the use of Government Waterworks. Nevertheless, the rapid development of Aquaculture as a globally important food sector and the potential broad social and economic advantages of Aquaculture development have brought Government to realise the importance of responsible and sustainable diversification of water resource utilisation. This includes the potential use of Government Waterworks for activities such as Tourism and Aquaculture. These assets can, however, only be accessed through the formation of Public Private Partnerships (PPPs) or approvals in terms of Government Notice R.654. Stage 1 provides for the options that need to be followed:

- Use of waterworks not owned by the Minister of Water Affairs and Forestry or water resources other than Government Waterworks to which lawful access can be gained.
- Access and use of Government Waterworks.

[2] *Note that during the PPP pre –feasibility and feasibility stages, it must be ensured that the requirements for environmental authorisations such as water use authorisations are assessed and that any fatal flaws are identified to limit the risks to the successful implementation of the PPP agreement (i.e. to ensure that the Private Party is in a favourable position to obtain later authorisations such as a water use licence).*

In the first instances the authorisation process for Aquaculture proceeds directly to Stage 2 in which the water uses and water use authorisation types are defined. In the second case the proposed Aquaculture project and its proponents are subject to the PPP regulations and procurement practice notes of National Treasury if the project is commercial as well as Government Notice R.654, otherwise only the requirements of Government Notice R.654.

Historically, Aquaculture development has not been permitted at Government Waterworks. For this reason the majority of projects of this nature will come forth from unsolicited proposals and hence differentiation is required between the processes that are required for such unsolicited proposals as opposed to solicited proposals.

In the case of solicited proposals the information required by National Treasury, DWAF and other stakeholders would be clearly defined in the invitation for proposals. This will be based on the PPP Manual, which is published and available from National Treasury (http://www.ppp.gov.za).

In the case of unsolicited proposals, DWAF requires certain baseline information with regard to the water resource and the potential impacts (social, economic and environmental) on which a decision will be made as to whether the applicable Government Waterworks may be utilised for aquaculture related purposes. This information is to be submitted to the Deputy Director General: National Water Resource Infrastructure (DDG:NWRI) as set out in Section 13.3.

11.3 Information Requirements for Stage 1

Following from the guidelines provided above (Section 13.2) the following information is required in the respective processes of this stage:

A. Aquaculture use of waterworks not owned by the Minister of Water Affairs and Forestry or water resources other than Government Waterworks to which lawful access can be gained.

   No information requirements – proceed to Stage 2

B. Solicited Proposals for aquaculture at Government Waterworks

   Follow information requests and formats as per specific invitation for the solicited proposal

C. Unsolicited Proposals for aquaculture at Government Waterworks

   Submit information to the DDG:NWRI in the format presented in Appendix A - Baseline Information Requirements by DWAF for Unsolicited Aquaculture Proposals for Use of Government Waterworks – if the activity is not commercial the same requirement apply but for the financial items

Technical assistance with the compilation of an unsolicited proposal may be obtained from the Aquaculture Association of Southern Africa (AASA):

PO Box 71894, The Willows, 0041, South Africa, Tel: +27 (0)12 807 6720,
Email: info@aasa-aqua.co.za, Website: www.aasa-aqua.co.za

Once DWAF has received and acknowledged receipt of this information an internal investigation will be conducted which could lead to one of the following outcomes:

- The applicant / proposing proponent will be informed that the proposal has been rejected.
- Additional information may be requested from the applicant.
- The unsolicited proposal may be accepted by DWAF for referral to a PPP process that will be conducted in accordance with the PPP Manual published by the National Treasury.

11.4 Tasks to be Undertaken by the Applicant

The tasks required from the applicant are as follows:

A. Determine status of the required water resources

The target water resources for Aquaculture development could be:

- Waterworks not owned by the Minister of Water Affairs and Forestry or water resources other than Government Waterworks to which lawful access can be gained - proceed to Stage 2.
- Government Waterworks - submit unsolicited proposal to DWAF in the format provided for in Appendix A.
- If an unsolicited proposal has been submitted, provide additional information if requested and await outcome.

B. Follow the PPP Process

- If the PPP process is based on a request for proposals from Government (i.e. a request for solicited proposal) then the information requests and formats as per the specific invitation for proposal must be followed. This will be based on the process in the PPP Manual published by the National Treasury.
- If the PPP process is called for after submission and acceptance of information (as per the format in Appendix A) submitted to DWAF, the process as published in the PPP Manuals by National Treasury is to be followed.

In the unsolicited proposal process, early consultation between the applicant and DWAF is important and can be beneficial to all parties. This consultation can take the form of informal discussions and/or meetings between the parties (and other stakeholders as may be applicable) and can provide guidance to the process, the tasks, the information requirements etc.

11.5 Tasks to be Undertaken by the Department

The tasks required from DWAF are as follows:

A. Receive and acknowledge unsolicited proposals

- When an unsolicited proposal for the use of a Government Waterworks is received, it must be referred to the DDG:NWRI.
- The unsolicited proposal must be verified for general conformity to the information requirements as stipulated in Appendix A. A letter of acknowledgement must be issued to the applicant within 14 days of receipt of the proposal.

B. Process and evaluate unsolicited proposals

- Once received by the office of the DDG:NWRI, the proposal must be verified for

completeness in accordance with Appendix A;
- If the information is incomplete a request for additional information must be submitted to the applicant within 30 days of receipt of the proposal;
- If the information in the proposal is complete it must be circulated to the relevant components of the NWRI and Policy and Regulation Branches for specialist input as well as any other relevant authority from which permissions and authorisations may be required;
- The respective branches must determine and report back whether:
    - the procedures followed to date have been adequate and that the legal and procedural requirements have been complied with;
    - sufficient consideration has been given by the applicant to:
        - identify the potential risks and impacts of the water use;
        - identify suitable mitigation measures for the identified potential impacts; and,
        - identify a responsible person and programme for the scheduling and implementation of the mitigation methods;
    - the information provided in the documentation received is accurate, unbiased, credible and at the required confidence level; and,
    - sufficient information is available to proceed with the water use authorisation application;
- The respective branches must be allowed 30 days for the provision of specialist's inputs; and,
- Once specialist inputs have been received from the respective branches, such inputs must be evaluated and a decision made by the office of the DDG:NWRI in terms of acceptance or non-acceptance of the proposal.

C. Refer acceptable proposals to the Accounting Officer for Approval

- If a decision has been taken to proceed with a commercial proposal, the DDG:NWRI must refer it to the Accounting Officer for approval to commence with a PPP procurement process.

D. Inform applicants of the outcome of unsolicited proposals

- A decision taken with regards to an unsolicited proposal must be communicated back to the applicant in a letter within 90 days of receipt of the proposal. If successful, the applicant may proceed to Stage 2 of the approvals process for the use of water for Aquaculture[3]; and
- If the proposal is commercial the applicant must be informed of the imminent PPP process and the opportunity to submit a proposal (bid) for formation of the PPP through which access may be gained to the target resources. Once successful in the PPP bid process, the applicant will be regarded as the "preferred bidder" and may then only proceed to Stage 2.
- The outcome must also be communicated to the relevant authorities and stakeholders that provided inputs towards the decision.

11.6 Summary of Outcomes

In summary the outcomes of Stage 1 are:

- The Aquaculture proponent will define the required water resources.
- If the water resources are located at Waterworks not owned by the Minister of Water

[3] *Note that in spite of the authorisation of water use for Aquaculture only being defined in Stage 2, the precise identification of these required authorisations will form part of the technical assessment of the proposal by DWAF.*

Affairs and Forestry or is a water resource other than Government Waterworks to which lawful access can be gained the applicant will be directed to Stage 2 of the authorisation process.

- If a Government Waterworks the applicant will be directed to submit an unsolicited proposal to DWAF.
- DWAF will acknowledge receipt of the unsolicited proposal, review the information through specialist interdepartmental services and take a decision as to whether the proposal is acceptable or not.
- If it is commercial and is supported by the Accounting Officer of DWAF, a PPP process will be initiated and the applicant informed.

12. STAGE 2: DETERMINING APPLICABLE WATER USES AND WATER USE AUTHORISATIONS

12.1 Purpose

The primary purpose of the second stage is to determine the types of water uses applicable for any particular aquaculture activity. Secondary purposes of the stage include providing clarity as to when:

- The use of water for Aquaculture is permissible under Schedule 1 of the NWA;
- The use of water for Aquaculture is permissible under an Existing Lawful Use as defined in the NWA;
- The use of water for Aquaculture is permissible under a General Authorisation as defined in the NWA; and
- A License application is required for the use of water for Aquaculture and which of the water uses (as defined in Section 21 of the NWA) and associated license applications are relevant or whether the requirement for a licence can be dispensed with.

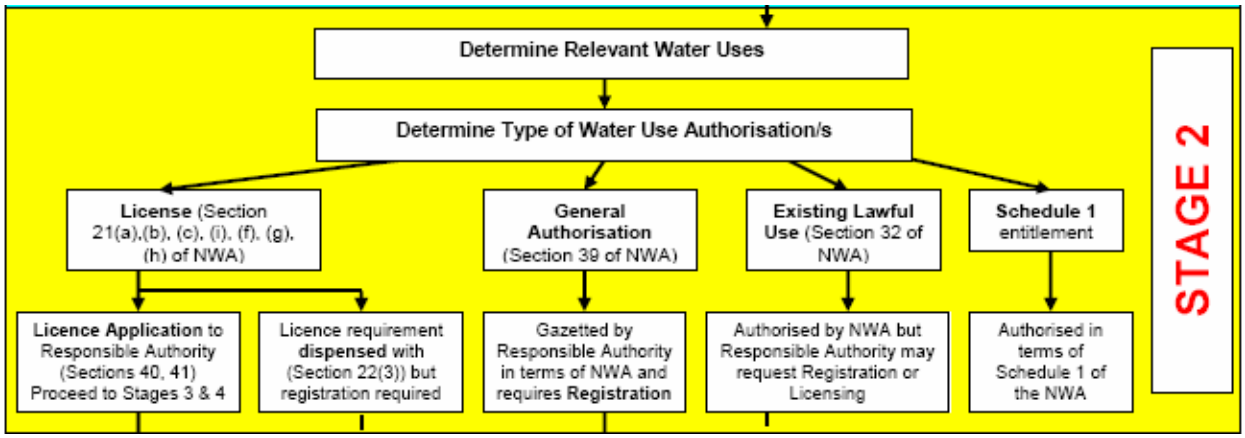

Figure 3: Diagrammatic Illustration of Stage 2.

12.2 Guidelines

The Aquaculture sector encompasses a wide variety of water related production methods for a vast range of organisms – plant and animal. For this reason the source, quality, quantity and application of water resources varies significantly together with a variety of approaches in the treatment and disposal of these water resources.

Small-scale subsistence type aquaculture could have limited impacts on water resources, while large commercial aquaculture ventures could pose a significant risk in terms of water use and water borne pollution sources. In this regard, this stage of the authorisation process

defines the precise need and precise type of water use authorisation as it relates to the uses of water in Aquaculture.

Once the Stage 1 process has been completed, the following subsections can be used to define the applicable water uses and what type of authorisation applies to the specific use.

12.2.1 Water Uses

All water uses recognised through the NWA are depicted in Section 21 of the NWA. In terms of the use of water for Aquaculture the following water uses as per Section 21 are relevant to the specific sector:

(a) taking water from a water resource;
(b) storing water;
(c) impeding or diverting the flow of water in a watercourse;
(f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;
(g) disposing of waste in a manner which may detrimentally impact on a water resource;
(h) disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;
(i) altering the bed, banks, course or characteristics of a watercourse;

For the sake of clarity these water uses can be divided into specific categories or groups as depicted in Table 1 below.

Table 1: Water Use Groups

Water Use Group	Activity Description	Water use (from Section 21 - NWA)
Non discharge-type water uses	Abstraction and storage	21(a): taking water from a water resource
		21(b): storing water
	Impact on a watercourse	21(c): impeding or diverting the flow of water in a watercourse
		21(i): altering the bed, banks, course or characteristics of a watercourse
Discharge-type water uses	Discharge of water containing waste (through various means) to the water resource	21(f): discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit
		21(g): disposing in any manner of water which may detrimentally impact on a water resource
		21(h): disposing in any manner of water which contains waste, or which has been heated in, any industrial or power generation process

12.2.2 Water Use Authorisations

This guideline does not reproduce the standard guidelines on water use authorisation or the authorisation guidelines that are pertinent to each individual water use and which are referenced in the standard guidelines. These documents are listed under *Supporting Documents* and should be read together with this guideline and can be obtained from any DWAF Regional Office or from the DWAF website (http://www.dwaf.gov.za).

12.2.2.1 When is a Schedule 1 Authorisation Applicable to Aquaculture?

If applied strictly to the possible uses of water for Aquaculture, a Schedule 1 entitlement will apply when:

- The Aquaculture activity makes use of any water from any water resource, provided that:
    - The person has lawful access to such a water resource.
    - The use is volumetrically equivalent to that which would be used for "*reasonable domestic use*". This means that no quantity over and above the normal volumetric use of a household may be taken from the water resource to sustain the Aquaculture activity.
    - The Aquaculture activity is integrated with the household use to such an extent that the use does not burden the water resource (volumetrically) any more so than what would have been the case without the Aquaculture activity/ies.
    - The Aquaculture activity/ies is of a small-scale and for subsistence use (and never commercial) only.
    - The Aquaculture activity is fully integrated into the domestic use of a single household, that household being in existence and occupied by the same person undertaking the Aquaculture activity and on the same property on which the Aquaculture activity takes place.
- The Aquaculture activity makes use of any water, which has been stored or collected from a roof.
- The discharge from the Aquaculture activities (regardless of quantity or quality) is led into a "*canal, sea outfall or other conduit controlled by another person authorised to undertake the purification, treatment or disposal of waste or water containing waste, subject to the approval of the person controlling the canal, sea outfall or other conduit".* This means that the discharge from any Aquaculture activities must be authorised by the applicable authority under whose auspices and responsibility the water discharge system falls. This implies that the discharge from the Aquaculture activity may be directed to systems dedicated and approved for the receipt of discharge water, provided that the applicable authority has granted the applicable authorisation to do so.

In summary thus, a Schedule 1 entitlement will apply to:

- Small scale (mainly non-commercial and residentially based) Aquaculture, which uses water in quantities that that does not exceed reasonable domestic use;
- Small scale (mainly non-commercial and residentially based) Aquaculture that makes use of runoff water from a roof; and,
- Aquaculture (of any size, type or scale) that discharges water into a canal, sea outfall or other conduit controlled by another person authorised to undertake the purification, treatment or disposal of waste or water containing waste, subject to the approval of the person controlling the canal, sea outfall or other conduit.

If the use of water for an Aquaculture activity qualifies as a Schedule 1 entitlement as defined in the NWA, the applicant requires no further application for authorisation.

Note that when a Schedule 1 entitlement is applicable to any one specific water use for Aquaculture it does not imply that all the water uses in the specific Aquaculture project are permissible under Schedule 1. Furthermore, an entitlement under this Schedule does not override any other law, ordinance, bylaw or regulation, and is subject to any limitation or prohibition there under.

12.2.2.2 When is an Existing Lawful Use Applicable to Aquaculture?

In terms of Aquaculture an Existing Lawful Use would normally apply to Aquaculture activities in which water was used during a period of two years immediately before the date of commencement of the NWA and which was authorised by any other law in force at the time.

Application may be made for the recognition of an Exiting Lawful Use in terms of Section 33 of the NWA (as amended in 1999) ("*Declaration of water use as existing lawful water use*"),

which, if granted, is subject to the stipulations of Section 34 of the NWA ("*Authority to continue with existing lawful water use*").

If the use of water for an Aquaculture activity qualifies for an Existing Lawful Use as defined in the NWA, the applicant requires no further application for authorisation. Nevertheless, the use is subject to the conditions set under any law repealed by the NWA and the Department or any Responsible Authority may request that an Existing Lawful Use be verified in terms of Section 35 of the NWA ("*Verification of existing water uses*") and/or registered or that an application be made for a water use Licence.

12.2.2.3 When is a General Authorisation Applicable to Aquaculture?

General Authorisations permit the use of water with certain restrictions and under certain conditions so as to facilitate legal access to water resources in instances where the potential harm to water resources or the potential impact of pollution sources are limited. In terms of Aquaculture, General Authorisations could apply to many of the typical water uses in the sector and are set out in:

- Government Notice (GN) 398 in Government Gazette (GG) 26187 of 26 March 2004 dealing with Section 21(c), (i) and (j) water uses; and
- GN 399 in GG 26187 of 26 March 2004 dealing with Section 21(a), (b), (e), (f), (h) and (g) water uses.

These General Authorisations are applicable until 25 March 2009, unless amended, extended or replaced by any other specific General Authorisation.

If the use of water for an Aquaculture activity qualifies for a General Authorisation such water use requires registration with DWAF, if not otherwise indicated in the General Authorisation. Guidelines on registration are set out in *A Guide to the Registration of Water Use under the National Water Act, First Edition, March 2000,* published by DWAF and registration forms for the use of water are obtainable from DWAF Regional Offices or from DWAF's website (http://www.dwaf.gov.za).

If an aquaculture activity's water use does not conform to the requirements of a General Authorisation, a licence must be applied for.

It is not intended that this guideline reproduce the conditions of each General Authorisation but that it provides general guidance as it applies to Aquaculture. It is thus essential that each user of this guideline refer to the General Authorisations as Gazetted.

In terms of the identified water uses for Aquaculture, General Authorisations apply under certain conditions as described below:

For Section 21(a) and (b) water uses

An aquaculture activity may take water from a water resource and store water provided that this use conforms to the following, failing which a Licence is required:

- The person who intends this use owns, lawfully occupies or has lawful access to the land on which the use will take place.
- The taking of groundwater is allowed in the quantities and areas specified in Table 1.2 of the gazetted General Authorisation in this regard.
- The taking of 15 litres per second (not exceeding 150 000 cubic meters per annum) of surface water, subject to the exclusion hereof in the areas specified in Table 1.1 of the gazetted General Authorisation in this regard.

- The storage of water up to 50 000 cubic meters, except in areas as specified in Table 1.3 (a) and Table 1.3 (b) of the gazetted General Authorisation (this respectively being for areas in which no storage is allowed and for areas in which the storage of only 10 000 cubic meters is allowed).

The taking and storage of water as allowed for above is furthermore subject to:

- The use not impacting on the water resource or on any other person's water use and property.
- The use not being excessive in relation to the capacity of the water resource and the needs of other users.
- The use not being detrimental to the health and safety of the public in the vicinity of the activity.

The General Authorisation for this use does not apply:

- To any lawful taking or storage within a government water control area, a government waterworks, a catchment control area or an irrigation district as defined in the Water Act, 1956 (Act No. 54 of 1956), prior to its repeal.
- To a person who does not have lawful access to any waterworks or water resource.
- To wetlands, the dewatering of mines, or the storage of water underground.
- To an exclusion zone of 750 meters inland from the high water mark.
- To an area where the limits of taking and storage of water were reduced in terms of Section 9B (1C) of the Water Act, 1956 (Act No 36 of 1956).

If water is used in terms of the above General Authorisation, such a use must be registered (by means of a registration form) before:

- Taking more than 50 cubic meters of surface water or 10 cubic meters of ground water on any given day.
- Storing more than 10 000 cubic meters (in combination) of water per property

Notes:

- Any dam used for the taking or storage of water must be in compliance with Chapter 12 of the NWA.
- The user must follow acceptable construction, maintenance and operational practises to ensure the consistent, effective and safe performance of the taking and storage of water.
- Where water is stored in a watercourse, the water user must take reasonable measures to ensure that the movement of aquatic species is not prevented, including those species that normally migrate through the watercourse.
- Users must establish a monitoring programme to measure the quantity of water that is taken and/or stored. Written records in this regard must be available on request.

For Sections 21(f) and (h) water uses

An Aquaculture activity may discharge wastewater into a water resource/s provided that this use conforms to the following, failing which a Licence is required:

- The person who intends this use owns, lawfully occupies or has lawful access to the land on which the use will take place.
- The discharge does not exceed 2 000 cubic meters on any given day into a water resource that is not a listed water resource set out in Table 3.3 of the gazetted General Authorisation in this regard, and:
    - The discharge is in compliance with the general wastewater limit values set out in Table 3.1 of the gazetted General Authorisation in this regard.

  - The discharge does not alter the natural ambient water temperature of the receiving water resource by more than 3 degree Celsius.
  - The discharge is not a complex industrial Wastewater.
- The discharge does not exceed 2 000 cubic meters on any given day into a water resource that is a listed water resource set out in Table 3.3 of the gazetted General Authorisation in this regard, and:
  - The discharge is in compliance with the special wastewater limit values set out in Table 3.1 of the gazetted General Authorisation in this regard.
  - The discharge does not alter the natural ambient water temperature of the receiving water resource by more than 3 degree Celsius.
  - The discharge is not a complex industrial Wastewater.

The discharge of wastewater as allowed for above is furthermore subject to:

- The use not impacting on the water resource or on any other person's water use and property.
- The use not being detrimental to the health and safety of the public in the vicinity of the activity.

The General Authorisation for this use does not apply to any person who discharges wastewater:

- Through sea outfalls.
- To an aquifer.
- Any other groundwater resource.
- Any water resource with a closed drainage system.

If a person intends to discharge wastewater in terms of the above General Authorisation, such a use must be registered prior to the commencement of such a discharge.

Notes:

- The user must follow acceptable construction, maintenance and operational practises to ensure the consistent, effective and safe performance of the discharge.
- Users must establish a monitoring programme to measure the quantity and quality of wastewater prior to the commencement of such a discharge as directed, and submitted monthly.

For the Section 21(g) water use

An Aquaculture activity may store domestic and/or biodegradable wastewater for the purpose of re-use provided that this use conforms to the following (failing which a Licence is required):

- The person who intends this use owns, lawfully occupies or has lawful access to the land on which the use will take place.
- Store up to 5 000 cubic meters of waste water on the property, provided that:
  - The property falls outside of the areas set out in Table 4.1 of the gazetted General Authorisation in this regard.
  - The use does not impact on the water resource or on any other person's water use and property.
  - The use is not detrimental to the health and safety of the public in the vicinity of the activity.

An Aquaculture activity may store domestic or biodegradable wastewater for the purpose of disposal provided that this use conforms to the following (failing which a Licence is required):

- The person who intends this use owns, lawfully occupies or has lawful access to the land on which the use will take place.
- Store up to 10 000 cubic meters of waste water on the property or 50 000 cubic meters if a wastewater pond system is in existence, provided that:
    - The property falls outside of the areas set out in Table 4.1 of the gazetted General Authorisation in this regard.
    - The use does not impact on the water resource or on any other person's water use and property.
    - The use is not detrimental to the health and safety of the public in the vicinity of the activity.

An Aquaculture activity may dispose of domestic or biodegradable wastewater provided that this use conforms to the following (failing which a Licence is required):

- The person who intends this use owns, lawfully occupies or has lawful access to the land on which the use will take place.
- Dispose of up to 1 000 cubic meters of waste water on any given day, provided that this is done into a wastewater pond or evaporation pond.
- Dispose into a wastewater irrigation system as set out in General Authorisation 2 (a Controlled Activity as defined in Section 21(e) of the NWA).
- The use does not impact on the water resource or on any other person's water use and property.
- The use is not detrimental to the health and safety of the public in the vicinity of the activity.

If a person intends to store or dispose of wastewater in terms of the above General Authorisation, such a use must be registered prior to:

- The storage of more than 1 000 cubic meters for disposal.
- The storage of more than 500 cubic meters for re-use.
- The disposal of more than 50 cubic meters on any given day.

Wastewater storage dams and wastewater disposal sites must be located:

- Outside a watercourse.
- Above the 100 year flood line, or alternatively, more than 100 meters from the edge of a water resource or a borehole which is utilised for drinking water or stock watering, which ever is further.
- On land that is not or does not overlie a major aquifer.

Notes:

- The user must follow acceptable construction, maintenance and operational practises to ensure the consistent, effective and safe performance of any wastewater disposal system or wastewater storage dam.
- All reasonable measures must be taken to prevent wastewater overflowing from any wastewater disposal system or wastewater storage dam
- Users must establish a monitoring programme to measure the location, quantity and quality of wastewater prior to the commencement of such a discharge as directed, and submitted monthly.

For Section 21(c) water use

An Aquaculture activity may impede and/or divert the flow in a watercourse provided that this use conforms to the following, failing which a Licence is required:

- The use does not impact on a water resource or on any other person's water use and/or property.
- The use is not detrimental to the health and safety of the public in the vicinity of the activity.
- The natural migration patters of aquatic biota and the sustainable ecological functioning of the system are not interfered with.
- Any structure built fully or partially in or across a water course does not:
    - Exceed a foundation width of 15 meters.
    - Exceed a length of 200 meters, measured from one side of the watercourse to the other.
    - Occur within a distance of 500 meters upstream or downstream of another structure that impedes or diverts the flow on the same watercourse, measured along the watercourse.
- The volume of flow is not reduced except for natural evaporative losses.
- The water quality is not detrimentally affected.
- Strict erosion measures are taken during and after construction to ensure no erosion of the bed or banks of a watercourse.
- All necessary measures are taken to stabilised the diversion structure and surrounding area, including:
    - Rehabilitation of the riparian habitat integrity by ensuring that only indigenous shrubs and grasses are used in restoring the bio-diversity during rehabilitation.
    - Rehabilitation of disturbed and degraded riparian areas to restore and upgrade the riparian habitat integrity to sustain a bio-diverse riparian ecosystem.
    - Removal of alien vegetation and all new alien vegetation recruitment.
    - Annual habitat assessment to monitor the sustainability of the diversion and compliance with the above conditions. Action must be taken to rectify any impacts.

The General Authorisation for this use does not apply:

- To areas as set out in Table 1.1 of the particular General Authorisation.
- To wetlands or any water resource within 500 meters upstream or downstream from the boundary of any wetland.
- To any estuary or any water resource within 500 meters upstream from the saltwater mixing zone of any estuary.
- To the storage of any water.

If water is used in terms of the above General Authorisation, such a use must be registered if the impedance or diversion occurs within a distance of 1 000 meters from any other impedance or diversion, measured along the watercourse.

Notes:

- All reasonable measures must be taken to ensure:
    - The stability of the watercourse is not detrimentally affected.
    - Scouring, erosion or sedimentation of the watercourse is prevented.
    - Rehabilitation of the watercourse, including riparian and instream habitat, is undertaken after any impedance or diversion.
- The user must follow acceptable construction, maintenance and operational practises to ensure the consistent, effective and sustainable impedance or diversion of flow.

For Section 21(i) water use

An aquaculture activity may alter the bed, banks or characteristics of a watercourse provided that this use conforms to the following, failing which a Licence is required:

- The person who intends this use owns, lawfully occupies or has lawful access to the land on which the use will take place.
- The alternation does not impact on a water resource or on any other person's water use and/or property.
- The use is not detrimental to the health and safety of the public in the vicinity of the activity.
- The natural migration patters of aquatic biota and the sustainable ecological functioning of the system are not interfered with.
- The alteration activity does not extend for more than 50 meters continuously or a cumulative distance of 100 meters on the property, measured along the watercourse.
- The volume of flow is not reduced except for natural evaporative losses.
- Strict erosion measures are taken during and after construction to ensure no erosion of the bed or banks of the river takes place.
- The water quality is not detrimentally affected
- All necessary measures are taken to stabilised the structure and surrounding area, including:
    - Rehabilitation of the riparian habitat integrity by ensuring that only indigenous shrubs and grasses are used in restoring the bio-diversity during rehabilitation.
    - Rehabilitation of disturbed and degraded riparian areas to restore and upgrade the riparian habitat integrity to sustain a bio-diverse riparian ecosystem.
    - Removal of alien vegetation and all new alien vegetation recruitment.
    - Annual habitat assessment to monitor the sustainability of the diversion and compliance with the above conditions. Action must be taken to rectify any impacts.
- Any structure built fully or partially in or across a watercourse does not exceed:
    - A height of 10 meters, measured from the natural level of the bed of the watercourse on the downstream face of the structure to the crest of the structure.
    - A width of 10 meters, measured at the widest part of the structure.
    - A length of 50 meters, measured from one edge of the watercourse to the other.
    - Occur within a distance of 500 meters upstream or downstream of another structure that alters the bed, banks or characteristics of the same watercourse, measured along the watercourse.

The General Authorisation for this use does not apply:

- The areas as set out in Table 2.1 of the particular General Authorisation.
- To wetlands or any water resource within 500 meters upstream or downstream from the boundary of any wetland.
- To any estuary or any water resource within 500 meters upstream from the saltwater mixing zone of any estuary.
- To the storage of any water.

If water is used in terms of the above General Authorisation, such a use must be registered if the alteration occurs within a distance of 1 000 meters from any other alteration, measured along the watercourse.

Notes:

- All reasonable measures must be taken to ensure:
    - The stability of the watercourse is not detrimentally affected.
    - Scouring, erosion or sedimentation of the watercourse is prevented.
    - Rehabilitation of the watercourse, including riparian and instream habitat, is undertaken after any alteration of the bed, banks, course or characteristics of a watercourse.
- The user must follow acceptable construction, maintenance and operational practises to ensure the consistent, effective and sustainable impedance or diversion of flow.

12.2.2.4 When is a License applicable to Aquaculture?

With reference to Section 22 of the NWA none of the water uses for Aquaculture may take place without the necessary license/s unless such a use:

- Is defined as a permissible use in terms of Schedule 1 of the Act;
- Is an Existing Lawful Use (as defined in Section 32 of the NWA);
- Is approved by a General Authorisation (as defined in Section 39 of the NWA); or
- If the Responsible Authority has dispensed with a licence requirement (as per Section 22(3) of the NWA).

Most aquaculture activities use and discharge water in manners that will trigger the need for license applications. By means of Section 14 of this guideline, authorities and stakeholders (participants) in the Aquaculture sector should be able to identify the applicable water uses and water use entitlements for an Aquaculture activity so that where required the applicable license applications may be made.

The DWAF guidelines on *External Water Use Licence Application Guideline, 2007* provides details on the procedures to be followed for license applications and *Water Use Licence Assessment Process: Internal Guideline, 2007* describes the factors that should be considered by the Department in the consideration of a license application.

12.2.2.5 Dispensing with the Requirement for a Licence

A Responsible Authority may dispense with the requirement for a licence if it is satisfied that the purpose of the NWA will be met by the grant of a licence, permit or other authorisation under any other law. Furthermore, and in the interests of co-operative governance, a Responsible Authority may promote arrangements with other organs of state to combine their respective licence / permit requirements into a single licence requirement.

12.3 Information Requirements for Stage 2

Following from the guidelines provided above, it will be clear that Stage 2 of the authorisation process for the use of water for Aquaculture purposes is largely a self-directed process in which a determination must be made as to which authorisation process (if any) is required for the intended water use. The information requirements are thus self-directed and must lead to the recognition (or selection) of one of the following options:

- A Schedule 1 entitlement for Aquaculture in which case no further application for authorisation is required.
- An Existing Lawful Use for Aquaculture in which case no further application for authorisation is required. A Responsible Authority may however request the registration or licensing of such a use, in which case the use must be directed to Stage 3 in this authorisation process.
- A Generally authorised water use for Aquaculture in which case the water use must be registered by completion and submission of the applicable registration forms (see Stage 3 in this authorisation process).
- A requirement for a Licence for Aquaculture in which case:
    - the licence must be applied for by completion and submission of the applicable licence application forms and submission of the additional information applicable to the application for water use licences in Aquaculture (see Stage 3 in this authorisation process); or
    - a process to dispense with a licence requirement must be initiated.

Assistance with the recognition (or selection) of the applicable authorisation type may be obtained from any DWAF Regional Office, the DWAF website (http://www.dwaf.gov.za) or from the AASA.

12.4 Tasks to be Undertaken by the Applicant

The tasks required from the applicant are as follows:

A. Determine all the types of water uses associated with the Aquaculture activity

The proponent or operator undertaking an Aquaculture activity must determine the applicable water uses as defined in Section 21 of the NWA.

B. Select the applicable authorisation type

For each of the water uses identified above the Aquaculture proponent or operator must determine the applicable authorisation type (by using the information provided in Section 14.2 above).

C. Direct relevant authorisation types into Stage 3 of the authorisation process

- If any of the identified water uses meet the criteria for a Schedule 1 entitlement (as defined in Schedule 1 of the NWA and Section 14.2.1 above) no further actions are required.
- If any of the identified water uses meet the criteria for an Existing Lawful Use (as defined in Section 32 of the NWA and Section 14.2.2 above) no further actions are required unless DWAF or a Responsible Authority direct that the water use must be subjected to a registration or licensing process. In such a case the authorisation process in terms registrations and licenses in Stage 3 will apply.
- If any of the identified water uses meet the criteria for a General Authorisation (as defined in Section 39 of the NWA and described in Section 14.2.3 above) then the water use must be registered according to the procedures in Stage 3 of the authorisation process, if not otherwise indicated.
- If any of the identified water uses meet the criteria for a License application (as defined in Section 39 of the NWA and described in Section 14.2.4 above) then the water use must be licensed according to the procedures in Stage 3 of the authorisation process. However, if the EIA process is suitably comprehensive there might be opportunity to dispense with the requirements for a licence. The applicant must facilitate or ensure that discussions between DWAF (Regional Offices) and the relevant environmental affairs authority take place. Should the licence requirement be dispensed with by DWAF the applicant must register the water use/s.

12.5 Tasks to be Undertaken by the Department

The tasks required from DWAF are as follows:

A. Assist in the determination of water uses and authorisation types

It is the role of the Department to assist Aquaculture proponents and operators in determining the applicable water uses and required authorisation types. This assistance will be rendered mainly through the Regional Offices, but can take the form of consultations, meetings and other means of communication.

B. Dispense with the requirements for a licence

If there is opportunity for dispensing with the requirement for a licence (i.e. a low impact activity with low risk to the water resource), the relevant Regional Office must consult with the applicable environmental authority to ensure that the required conditions for water use is included in the environmental authorisation.

A motivation for dispensing with the requirement for a licence must be prepared in co-operation with the environmental authority and the lead water use agent (DWAF Head Office) and submitted to the Chief Director: Water Use. The motivation must be accompanied by at minimum a draft Record of Decision and Environmental Management Plan. The outcomes of the submission must be communicated to applicant. If the dispensing application is successful, the applicant must be directed to register the water use/s, if not, the applicant must be directed to proceed with a licence application (refer Stage 3).

12.6 Summary of Outcomes

In summary the outcomes of Stage 2 of the authorisation process for the use of water for Aquaculture are:

- The Aquaculture proponent or operator would have identified all of the applicable water uses (as defined in Section 21 of the NWA) associated to the aquaculture activity.
- The Aquaculture proponent or operator would have identified the required authorisation types for the applicable water uses.
- For the registration of water use and the application for Licenses the Aquaculture proponent or operator will continue to Stage 3 of the authorisation process. At this point pre-application consultation between the applicant and DWAF is important to ensure that the authorisation proceeds smoothly. Such consultation can take the form of informal discussions and/or meetings between the parties (and other stakeholders as may be applicable).

13. STAGE 3: APPLICATION FOR LICENCES AND REGISTRATION OF WATER USE

13.1 Purpose

The primary purpose of Stage 3 is to steer the Aquaculture proponent or operator through the process of a license application and registration of water uses applicable to the Aquaculture activities. Secondary purposes of the stage include:

- Providing guidance around the standard license application and registration procedures for water uses.
- Providing guidance around the additional information requirements in the licensing of water uses related to Aquaculture.

13.2 Guidelines

Having determined the requirement for a License/s or Registration of a water use/s related to Aquaculture (Stage 2), this stage guides the Aquaculture proponent or operator through the applicable registration or application procedures. In this regard two distinct processes are dealt with in Stage 3, these being licensing (i.e. for water use licenses) and registration. In both cases Stage 3 provides guidance on the standard forms that need to be completed for

either Licensing or Registration.

It is, however, not the intention of this guideline document to reproduce these standard forms, as they are self explanatory and can be obtained from any DWAF Regional Office or from the DWAF website (http://www.dwaf.gov.za) nor the authorisation guidelines pertinent to each individual water use – these documents are referenced under *Supporting Documents* and should be read together with this guideline.

In the case of an application for a water use licence/s related to Aquaculture, the applicant is required to submit additional Aquaculture specific information. This information requirement is fully explained in the following subsections and under 15.3.2.2.

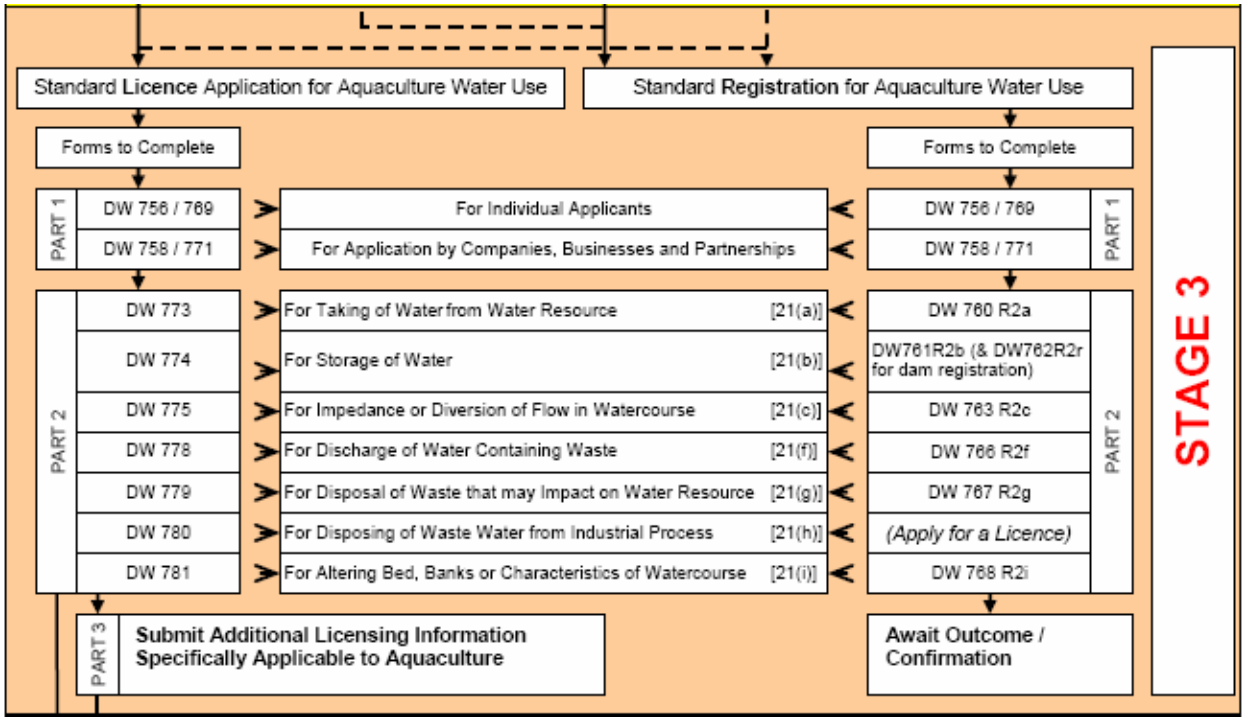

Figure 4: Diagrammatic Illustration of Stage 3

13.3 Information Requirements for Stage 3

13.3.1 Registration of Water Use

If any of the water uses related to an Aquaculture activity meet the criteria for a General Authorisation (as identified in Stage 2) or where the requirement for a licence has been dispensed with, the Aquaculture proponent or operator must register the use, if not otherwise indicated. The information requirements in this regard are fully captured in the necessary standard forms, of which two or more need be completed for such registration. These forms are:

- Completion of one of the following forms depending on the nature of the Aquaculture proponent or operator:
  - DW 756 / 769 – being the form that captures the **particulars of individual applicants**.
  - DW 758 / 771 – being the form that captures the **particulars of companies, businesses and partnerships**.

- Completion of one or more of the following depending on which water use/s have been identified for registration:

- DW 760 R2a – being the form that captures the details pertaining to the registration of **taking of water** from a water resource (as per Section 21(a) of the NWA).
- DW 761 R2b – being the form that captures the details pertaining to the registration of **storage of water** (as per Section 21(b) of the NWA).
- DW 762 R2r – being the form that captures the details pertaining to the registration of **storage of water** (as per Section 21(b) of the NWA), specifically by means of a dam.
- DW 763 R2c – being the form that captures the details pertaining to the registration of **impedance or diversion** of the flow of water in a watercourse (as per Section 21(c) of the NWA).
- DW 766 R2f – being the form that captures the details pertaining to the registration of **discharge of waste or water containing waste** into a water resource through a pipe, canal, sewer, sea outfall or other conduit (as per Section 21(f) of the NWA).
- DW 767 R2g – being the form that captures the details pertaining to the registration of **disposal of waste** in a manner, which may detrimentally impact on a water resource (as per Section 21(g) of the NWA).
- DW 768 R2i – being the form that captures the details pertaining to the registration of **altering of the bed, banks or characteristics** of a watercourse (as per Section 21(i) of the NWA).

Note that the water use activity in Section 21h (the **disposing of water, which contains waste** from any industrial process, which could apply to an Aquaculture activity) is not eligible for registration and must be subjected to a licensing process.

The forms listed above for registration are obtainable from DWAF Regional Offices or from http://www.dwaf.gov.za.

13.3.2 Licensing of Water Use

A water use license is typically required when the water use has the potential to negatively effect instream water quality objectives, when the potential impacts are unknown, when the use takes place in a sensitive water resource area, when the magnitude of the possible impacts are large and when the success of mitigation is not clear.

If any of the water uses related to an Aquaculture activity meet the criteria for a License (as identified in Stage 2), the Aquaculture proponent or operator must apply for such a License by means of the standard license application forms and by means of providing the additional Aquaculture related information as stipulated below.

The information requirements in both these cases are provided in the following two subsections:

13.3.2.1 Standard Licence Application Forms

The information and related requirements for licence applications are captured in the necessary standard forms of which two or more need be completed, including:

- One of the following forms depending on the nature of the Aquaculture proponent or operator:
  - DW 756 / 769 – being the form that captures the **particulars of individual applicants**.
  - DW 758 / 771 – being the form that captures the **particulars of companies, businesses and partnerships**.

- One or more of the following depending on which water use/s have been identified for licensing:
    - DW773 – being the form that captures the details pertaining to the licence for the **taking of water** from a water resource (as per Section 21(a) of the NWA).
    - DW774 – being the form that captures the details pertaining to the licence for the **storage of water** (as per Section 21(b) of the NWA).
    - DW775 – being the form that captures the details pertaining to the licence for the **impedance or diversion** of the flow of water in a watercourse (as per Section 21(c) of the NWA).
    - DW778 – being the form that captures the details pertaining to the licence for the **discharge of waste or water containing waste** into a water resource through a pipe, canal, sewer, sea outfall or other conduit (as per Section 21(f) of the NWA).
    - DW779 – being the form that captures the details pertaining to the licence for the **disposal of waste** in a manner, which may detrimentally impact on a water resource (as per Section 21(g) of the NWA).
    - DW780 – being the form that captures the details pertaining to the licence for the **disposing of water, which contains waste** from any industrial process (as per Section 21h of the NWA).
    - DW781 – being the form that captures the details pertaining to the licence for the **altering of the bed, banks or characteristics** of a watercourse (as per Section 21(i) of the NWA).

Note that for certain of the water uses additional information requirements may apply and for which supplementary forms and checklists must be completed and submitted along with the standard forms, e.g.:

- Information questionnaire for Section 21(c) and (i) water uses.
- DW787 - taking water from a water resource - Irrigation field and crop information.
- DW784pmp - taking water from a water resource - Pump technical data.
- DW788ind - taking water from a water resource - Power generation, industrial or mining use.
- DW790tec -storing water-Dam and basin technical data.
- DW799qal - discharging or disposing of waste water - Quality of water, waste or water containing waste.

The forms listed above are obtainable from DWAF Regional Offices or from the DWAF website (http://www.dwaf.gov.za).

13.3.2.2 Additional Information Requirements for Aquaculture

For Section 21(a), (b), (c) and (i) water uses the additional information requirements are:

- A list and review of applicable Government planning frameworks, e.g. Aquaculture Development Zones; Integrated Development Plans; Local Development Plans; etc.
- A description of the Aquaculture type in terms of:
    - It being a fresh -, marine -, brackish - or estuarine water driven Aquaculture system.
    - The intended Aquaculture specie and to which of the following groups the species it belongs:
        - Algae
        - Amphibian
        - Aquatic plants
        - Crustacea
        - Finfish
        - Molluscs
        - Reptiles

- Whether the intended production species is exotic, indigenous but extralimital or indigenous along with proof of DEAT, DoA permissions.
- The intended production capacity in tons per annum (round weight and unprocessed).
- The type of aquaculture production system in which the water will be used, to which the options are:
  - Tank culture
  - Raceway culture
  - Pond culture
  - Cage culture
- The type of Aquaculture water management system, to which the options are:
  - Through flow – using water once in route for production
  - Partial re-circulation – using water more than once in route for production
  - Re-circulation – continuous reticulation of water internally with less than 10% of the production volume requiring replacement per day
  - Cage culture

For Section 21(f), (g) and (h) water uses the additional information requirements are:

- All of the information requirements as listed above for water uses identified in Sections 21(a), 21(b), 21(c) and 21(i) of the NWA.
- The type of post production water management system, to which the options are:
  - No filtration or settlement system.
  - Directed to off-site treatment or water works.
  - Directed to irrigation.
  - Settlement (on-site) (e.g. sedimentation pond/s).
  - Contained bio-filtration (on-site) (bio blocks or other contained medium).
  - Open bio-filtration (on-site) (e.g. wetland).
  - Mechanical filtration (on-site) (e.g. sand and drum filters).
  - Chemical filtration (on-site) (e.g. flocculation).
  - Dilution by means of adding water or through cage culture practises.
- The intended feed quantity per annum and the feed type, to which the options are:
  - Extruded feeds.
  - Pellet feeds.
  - Others – specify.

13.4 Tasks to be Undertaken by the Applicant

13.4.1 Registration of Water Use

The tasks required from the applicant are as follows:

A. Obtain and Complete the Correct Registration Forms

In the case of the registration for generally authorised water use or where a licence requirement has been dispensed with the Aquaculture proponent or operator must obtain the correct registration forms as detailed in Section 15.3.1 above.

In the first instance, form DW 756 / 769 or form DW 758 / 771 must be completed as this captures the details of the proponent or operator according to the nature of the individual, company, business or partnership.

In the second instance the form/s relevant to the particular water use/s must be completed (either form DW 760 R2a, DW 761 R2b, DW 762 R2r, DW 763 R2c, DW 766 R2f, DW 767 R2g or DW 768 R2i).

The completed forms must be submitted to a DWAF Regional Office or Responsible Authority.

B. Provide Additional Information if Required

If DWAF or a Responsible Authority requires more information in the process of registration, the Aquaculture proponent or operator should provide this without delay so as to ensure the completion of the registration process.

C. Await Outcome and Confirmation of Registration

The Aquaculture proponent or operator must await the written confirmation of the registration of the water use/s, after which the aquaculture activities may commence.

13.4.2 Licensing of Water Use

A. Obtain and Complete the Licence Application Forms

In the case of an application for a water use Licence the Aquaculture proponent or operator must obtain the correct licence application forms as detailed in Section 15.3.2.1 above.

In the first instance, form DW 756 / 769 or form DW 758 / 771 must be completed as this captures the details of the proponent or operator according to the nature of the individual, company, business or partnership.

In the second instance the form/s relevant to the particular water use/s must be completed (either form DW773, DW774, DW775, DW778, DW779, DW780 or DW781 including any supplementary forms and checklists).

The completed forms must be submitted to a DWAF Regional Office or Responsible Authority.

B. Compile and Submit Additional Aquaculture Information

The Aquaculture proponent or operator must collect, compile and submit the additional Aquaculture specific information as detailed in Section 15.3.2.2 above. This must be submitted with the standard Licence application forms.

C. Provide Additional Information if Required

If DWAF or Responsible Authority requires more information in the process of licensing, the Aquaculture proponent or operator should provide this without delay so as to ensure the completion of the licensing process.

D. Await Outcome of the Licence Application

The Aquaculture proponent or operator must await the outcome of the License application, which will be determined by the evaluation process detailed in Stage 4 of this authorisation guideline.

13.5 Tasks to be Undertaken by the Department

13.5.1 Registration of Water Use

The tasks required from DWAF are as follows:

A. Assist with the Registration Process

DWAF officials or the officials from any Responsible Authority must assist Aquaculture proponents or operators with the registration process wherever possible. Such assistance should include the provision of the correct registration forms, assistance with completion of the forms, consultation and other communication where necessary.

B. Receive Registration Forms

The DWAF Regional Office or Responsible Authority must receive the completed registration forms for processing.

C. Inform Aquaculture Proponent of Operator of Outcome

The DWAF Regional Office or Responsible Authority must inform the Aquaculture proponent or operator of the outcome of the registration process within a reasonable timeframe.

13.5.2 Licensing of Water Use

The tasks required from DWAF are as follows:

A. Assist with the Licensing Process

DWAF officials or the officials from a Responsible Authority must assist Aquaculture proponents or operators with the licensing process wherever possible. Such assistance should include the provision of the correct licence application forms, assistance with completion of the forms, consultation and other communication where necessary.

B. Receive Licence Applications

The DWAF Regional Office or Responsible Authority must receive the completed licence application forms together with the specific additional information that applies to the application for water use licences associated with Aquaculture.

C. Record and Register the Licence Application Details

The DWAF Regional Office or Responsible Authority must verify that:

- The application form/s are completed correctly from an administrative perspective, i.e. that all necessary fields have been completed.
- That the additional information specific the Aquaculture has been submitted.

If any of this information has not been completed and submitted in full the application must be referred back to the applicant with a cover letter explaining the shortcomings.

The license application must be registered according to the required administration protocol.

D. Inform the Applicant of Receipt of the Application

The DWAF Regional Office or Responsible Authority must inform the applicant in writing that the licence application has been received and registered. This correspondence must indicate the registration number and the envisaged timeframes for the evaluation and processing of the application.

E. Proceed with Evaluation of Licence Application

The DWAF Regional Office or Responsible Authority must direct the licence application to Stage 4 of the authorisation process in which the application is evaluated.

13.6 Summary of Outcomes

In summary the outcomes of Stage 3 are:

- The Aquaculture proponent or operator would have completed and submitted the necessary forms for the registration of the required water uses (as defined in Section 21 of the NWA) associated with the Aquaculture activity.
- The Aquaculture proponent or operator would have completed and submitted the necessary license application forms and additional Aquaculture specific information for the licensing of water uses (as defined in Section 21 of the NWA) associated with the Aquaculture activity.
- The DWAF Regional Office or Responsible Authority would have provided written acknowledgement of water use registration or would refer any licence applications to Stage 4 of the authorisation process in which the licence application is evaluated. At this point consultation between the applicant and DWAF is important to ensure that the authorisation proceeds smoothly. Such consultation can take the form of informal discussions and/or meetings between the parties (and other stakeholders as may be applicable).

14. STAGE 4: EVALUATION, SETTING OF LICENCE CONDITIONS AND ISSUING OF LICENCE

14.1 Purpose

The primary purpose of the fourth stage is to provide guidance on the evaluation of applications for water use licenses associated with Aquaculture. Secondary purposes of the stage include:

- Providing guidance on the evaluation of Aquaculture specific information, which is submitted with the license application forms for water uses associated with Aquaculture activities.
- Providing guidance of the conditions under which licenses may be issued for water uses associated with Aquaculture.

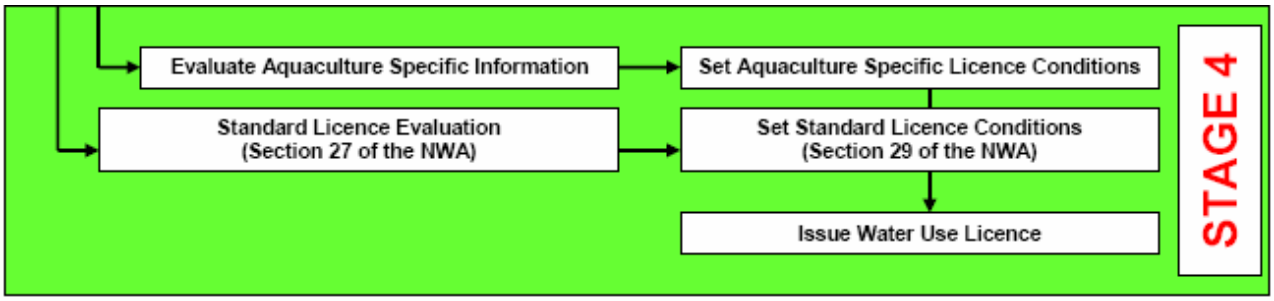

Figure 5: Diagrammatic Illustration of Stage 4

14.2 Guidelines

Stage 4 of the authorisation process is dedicated to the evaluation and issuing of water use

licenses associated with Aquaculture. This consists of the evaluation of the standard license application submitted according to the procedures in Stage 3 and the evaluation of the Aquaculture specific information submitted with the license application.

It is not the intention of this guideline document to reproduce the standard license evaluation criteria, but rather to focus on the evaluation of the Aquaculture specific information.

More information on the standard evaluation process may be obtained from DWAF Regional Offices or from the DWAF website (http://www.dwaf.gov.za).

14.3 Information Requirements for Stage 4

All of the information that drives the evaluation process is provided in Stage 3 of this authorisation guideline. The only information requirements for Stage 4 is thus in cases where the DWAF Regional Office or Responsible Authority may require additional clarification or inputs into the information already provided in the licence application. In cases where additional information is required the DWAF Regional Office or Responsible Authority will request such information from the applicant.

14.4 Tasks to be Undertaken by the Applicant

Having already submitted the application for a water use license in Stage 3 the applicant is left with little additional tasks outside of the following:

A. Submit Additional Information that may be Requested

   The DWAF Regional Office or Responsible Authority may require additional clarification or inputs in order the process and evaluate the water use licence application. In such a case a written request will be submitted to the applicant, upon which the applicant must react by submission of the additional information requested. It is recommended to all applicants for water use licences associated with Aquaculture to consider the evaluation criteria in Stage 4 of the authorisation process so that applications can be comprehensively accompanied with the correct information.

B. Follow up the Application

   It is in the interest of the Aquaculture proponent or operator to follow up any application that has been submitted for a water use license and to continuously establish whether the DWAF Regional Office or Responsible Authority have all the required information to process the application.

C. Receive and Comply with the Conditions of a Licence

   Once the Aquaculture proponent or operator has received the outcome of the license application, the applicant must comply with the conditions that may be set with the license.

14.5 Tasks to be Undertaken by the Department

The tasks required from DWAF are as follows:

A. Conduct a Standard Evaluation of the Licence Application

- Section 27 of the NWA provides details on the evaluation process for water use license applications (refer *Water Use Licence Assessment Process: Internal Guideline, 2007*). In this regard DWAF or Responsible Authority should take the following factors into account (amongst others):

  - The need to redress the results of past racial and gender discrimination;
  - The efficient and beneficial use of water in the public interest;
  - The socio-economic impact of:
    - The water use or uses if authorised; or
    - The failure to authorise the water use or uses;
  - Any catchment management strategy applicable to the relevant water resource;
  - The likely effect of the water use to be authorised on the water resource and on other water users;
  - The class and the resource quality objectives of the water resource;
  - The investments already made and to be made by the water user in respect of the water use;
  - The strategic importance of the water use to be authorised;
  - The quality of water in the water resource which may be required for the Reserve and for meeting international obligations; and
  - The probable duration of any undertaking for which a water use is to be authorised.

  In the evaluation process DWAF or Responsible Authority may also:

  - Request an assessment by a competent person of the likely effect of the proposed licence on the water resource quality;
  - Conduct its own investigation on the likely effect of the proposed licence on the protection, use, development, conservation, management and control of the water resource;
  - Invite written comments from any organ of state or person who has an interest in the matter and may direct the applicant to conduct a public participation process;
  - Investigate whether adequate attention has been given to alternative means of water resource utilisation and,
  - Commission a specialist study or review with regard to the Aquaculture water use in instances when the nature of the aquaculture activity is technically advanced and the risk to the water resource is uncertain.

B. Evaluate the Aquaculture Specific Information

With the application for a license for the use of water associated with Aquaculture, additional specific information will be submitted and must be evaluated as follows:

- At commencement the information must be verified for completeness and that it is clear and understandable. If not, a written request must be formalised and sent to the applicant to request the revision of existing information or the provision of additional information where applicable. Applicants may also be advised to consult with a technical advisor / consultant in aquaculture to seek assistance. Other organisations that may provide assistance in this regard include:
  - AASA
  - The Northern and/or Southern Aquaculture Working Groups
  - Universities, especially the Universities of Stellenbosch, Rhodes, Limpopo and Venda
- Review the list of applicable Government planning frameworks and ensure that the Aquaculture activity is supported.
- Evaluate the Aquaculture type as follows:
  - If the Aquaculture activity intents to make use of marine waters, verify that approval has also been obtained (or is in the process of being obtained) from the Marine and Coastal Management Branch of the Department of

Environmental Affairs and Tourism (DEAT:MCM) (in terms of the Marine Living Resources Act, 1998 (Act No. 18 of 1998) (MLRA)).
    - If the Aquaculture activity intents to make use of brackish waters, technical advice must be gained to ensure that the intended specie is suited to the brackish water conditions.
    - If the Aquaculture activity intents to use estuarine waters, ensure that the right of access is clear and that the resource is not protected through other legislation such as the Protected Areas Act, 2003 (Act No. 57 of 2003).
- Evaluate the Aquaculture species as follows:
    - If the intended Aquaculture specie/s is marine, verify that approval has also been obtained (or is in the process of being obtained) from DEAT:MCM (in terms of the MLRA).
    - If the intended Aquaculture specie/s is exotic and/or indigenous but extra-limital, ensure that approval has also been obtained (or is in the process of being obtained) from the Provincial Environmental Departments for the use of the specie (in terms of NEM:BA).
    - If the intended Aquaculture specie/s is indigenous, request confirmation of the source stock and confirm the acceptability of the source (in terms of disease and genetic status) from one or all of the following organisations:
        - Provincial Environmental Departments;
        - Local Conservation Authorities; or
        - AASA.
- Evaluate the Production Capacity as follows:
    - If the production capacity is over 10 tons per annum (except for crocodiles – refer to the next bullet), ensure that approval has also been obtained (or is in the process of being obtained) from the Provincial Environmental Departments (in terms of NEMA) and that DWAF has been consulted in the EIA process.
    - If the production density of crocodiles exceeds 30 square metres per crocodile (i.e. is less than 30 square meters per crocodile) at any level of production (excluding crocodiles younger than 6 months), ensure that approval has also been obtained (or is in the process of being obtained) from the Provincial Environmental Departments (in terms of NEMA) and that DWAF has been consulted in the EIA process.
- Evaluate the Aquaculture production systems as follows:
    - If the intended Aquaculture activity makes use of cage culture, insist on the provision of production capacity modelling on the water resource that will sustain the cage system. This must be done by the use of the Phillips and Beveridge (1987) production capacity model for cage culture and the applicant may need to consult with a professional advisor / consultant in this regard.
- Evaluate the Aquaculture water management system as follows:
    - If the intended Aquaculture activity makes use of through flow, consider whether the Aquaculture activity is an expansion, in which case the applicant must motivate why water cannot be used more effectively by multiple re-cycling of the existing water resources in use.
    - If the intended Aquaculture activity makes use of re-circulation, do not allow for the replacement of more than 20% of the production water volume per day.
- Evaluate the Aquaculture post production water management system as follows:
    - If the intended Aquaculture production capacity exceeds 10 tons per annum, do not issue a water use license if no filtration or settlement in post-production water resources is proposed by the applicant (not applicable to cage culture operations).
    - If the intended post-production settlement in water resources is on the same property as the intended Aquaculture activities, the applicant must provide

details of the ratio between the settlement volume and the production system volume. Generally the ratio should be at least 1:5 or smaller. In addition to this, the applicant must provide details with regards to the methods and scheduling for the removal of settled solids from the intended settlement facilities.

- If the intended Aquaculture activities are due to make use of bio-filtration, the applicant must provide details of the ration between the bio-filtration volume and the production system volume. Generally the ration should be at least 1:10 or smaller.
- If the intended Aquaculture activities are due to make use of mechanical filtration, the applicant must provide an indication of the methods and scheduling for the removal of solids from the filtration units.
- If the intended Aquaculture activities are due to make use of chemical filtration, the applicant must provide details of the chemical types, scheduling and dosages.
- If the intended Aquaculture activities are due to make use of cage culture systems, insist on the provision of production capacity modelling on the water resource that will sustain the cage systems. This must be done by the use of the Phillips and Beveridge (1987) production capacity model for cage culture and the applicant may need to consult with a professional advisor / consultant in this regard.

- Evaluate the Aquaculture feeds as follows:
  - If the intended Aquaculture activities are proposing the use of pelleted feeds, some type of post-production water management system must be proposed for the issuance of a license.
  - If the intended Aquaculture activities are proposing the use of feeds other than pelleted or extruded feeds, the applicant must specify the feed type, give a logical indication of the possible water quality impacts and propose some type of post-production water management system.

C. Formulate Standard Licence Conditions

If the water use license application is recommended DWAF or the Responsible Authority must formulate the conditions, which will be associated with the licence (including those which may be associated with General Authorisations). The formulation of these conditions for Standard Licence applications is detailed in Section 29 of the NWA, also refer *DWAF, Water Use Licence Assessment Process: Internal Guideline, 2007.*

D. Formulate Aquaculture Specific Licence Conditions

With the application for a license for the use of water associated with Aquaculture, DWAF or a Responsible Authority may set additional Aquaculture specific conditions to a water use license. These include, but are not limited to, the following:

- Conditions may be set to further clarify aspects in the Aquaculture specific evaluation criteria and process. DWAF or Responsible Authority may request proof of such conditions being met by the applicant before they commence with the intended Aquaculture activities.
- If the Aquaculture activity intends to make use of marine waters or marine species, the license must be conditional to the applicant obtaining the necessary authorisations from DEAT:MCM (in terms of the MLRA).
- If the Aquaculture activity intends the production of more than 10 tons per annum (or less than 30 square meters per crocodile), the license must be conditional to the applicant obtaining the necessary authorisations form the Provincial Environmental Departments (in terms of NEMA).

- If the Aquaculture activity intends the production of more than 10 tons per annum (or less than 30 square meters per crocodile or more than 50 000 individual organisms in the case of all hatcheries), a comparative water quality monitoring programme must be a condition of the license. In this programme the following water quality parameters are to be measure prior to the commencement of Aquaculture production and at least once every 3 months thereafter. Water samples in this regard are to be collected from incoming (pre-production water resource) and from discharged (post-production) water resources, analyses by an accredited laboratory and recorded for scrutiny if and when required. The minimum set of parameters are:
    - Ortho- and Total Phosphate as Phosphorous (mg/l)
    - Nitrate/Nitrite as Nitrogen (mg/l)
    - Ammonia as Nitrogen (mg/l)
    - pH
    - Chemical Oxygen Demand (mg/l)
    - Electrical Conductivity (mS/m)
    - Suspended Solids (mg/l)
- All water use licences associated with Aquaculture must be conditional to the development of a feed management programme in which daily feed application is derived from the actual and calculated needs of the production organism.
- All water use licences associated with Aquaculture must be conditional to reasonable measures being taken to prevent the escape of aquaculture organisms from the Aquaculture production facilities.
- All water use licences must be conditional to a water resource 'environmental management plan that details how the various impacts of the water use will be managed and mitigated as well as monitored.

E. Issue the Water Use Licence

Based on the evaluation and formulation of conditions for water use licenses, DWAF or a Responsible Authority must prepare and issue the license to the applicant (if the application has been successful). Such licenses must meet the essential requirements as set out in Section 28 of the NWA.

The result of the licence application must be conveyed to the applicant in writing and within a reasonable timeframe. This correspondence must also explain the right of the applicant to appeal against an unfavourable outcome (refer 16.6).

14.6 Appeal and Related Procedures

Any person, including the applicant, an interested party or a member of the public, who feels aggrieved by a decision made by DWAF or a Responsible Authority, may lodge an appeal against the decision. The appeal should be directed to the Water Tribunal as per Sections 148 to 150 of the NWA.

An appeal to the Water Tribunal must be done in writing within 30 days from the date on which the decision was issued to the applicant. The appeal must detail the facts and the grounds for the appeal and must be accompanied by all relevant documentation (copies of documents must be certified as true by a commissioner of oaths).

The Water Tribunal shall, after considering all relevant facts and supporting documentation,

- Uphold the original decision,
- Uphold the original decision with modifications, or
- Reverse the original decision.

An appeal against the decision of a Water Tribunal may be made to the High Court of South Africa.

The Minister may at any time, at the request of a person involved or on the Minister's own initiative, direct that the persons concerned attempt to settle their dispute through a process of mediation and negotiation.

14.7 Summary of Outcomes

In summary the outcomes of Stage 4 are:

- The application for a water use license associated with Aquaculture would have been evaluated according to the standard procedures for the evaluation of water use licenses.
- The application for a water use license associated with Aquaculture would have been evaluated according to the Aquaculture specific evaluation criteria for the issuance of water use licenses associated with the use of water for Aquaculture.
- Conditions would have been set for the water use license according to the standard procedures for the setting of water use license conditions.
- Conditions would have been set for the water use license according to the Aquaculture specific procedures for the setting of water use license conditions.
- The applicant would have been informed of the outcome of the license application and their right to appeal against such an outcome.

15. CONCLUSION

The use of water is central to Aquaculture and for this reason access to water resources is imperative for the development of the South African Aquaculture sector. Given the global growth of Aquaculture and the social and economic advantages behind Aquaculture development in South Africa, it is certain that increased demands will be placed on access to water resources in this sector. The timely understanding and participatory management of this use by DWAF and the sector will contribute greatly to the organised and sustainable use of water for Aquaculture.

This guideline is dedicated to the improvement of the approach and implementation of the NWA in Aquaculture. As the Aquaculture sector develops, the guideline will be reviewed and improved upon to ensure that the Aquaculture sector can develop in an administratively just environment, in a sustainable manner and to the benefit of its participants and the country as a whole.

APPENDIX A: BASELINE INFORMATION REQUIREMENTS FOR UNSOLICITED AQUACULTURE PROPOSALS

UNSOLICITED PUBLIC PRIVATE PARTNERSHIP PROPOSAL: OUTLINE BUSINESS CASE

Terms of submitting an outline business case

The unsolicited proposer is requested to supply the Department of Water Affairs and Forestry (DWAF) with an outline business case giving at least the information set out in the categories specified below. Further elaboration or information may be supplied at the proponent's discretion.

DWAF will consider the outline business case and, in its sole discretion, within the regulatory framework, determine the process to be followed. Within 60 days of receiving the proposer's outline business case, DWAF will inform the proposer in writing of its determination and further actions.

In the event that the Department deems the opportunity to be a possible Public Private Partnership (PPP), to be timeously in keeping with its strategic plan for commercialisation and manageable within its resources and capacity, DWAF will inform the proponent of its intention to follow the regulatory provisions for PPPs, as elaborated in National Treasury's *PPP Manual*, including an open and competitive procurement, and will inform the proponent of the planned timeframes for such procurement. In the event that DWAF is not interested in pursuing the proposal, it will inform the proponent accordingly.

The institution expressly does not make any representations of any kind, nor accepts any obligations or liabilities, through corresponding with the unsolicited proposer with regard to the proposal. All costs incurred in preparing and submitting the outline business case, are for the proponent's own account.

The specific information submitted to DWAF by the proponent in the outline business case will not be disclosed by DWAF to any potential or actual competing bidders, other than information which is already in the public domain or which the institution is required to disclose by law. However, the institution does not acknowledge that any intellectual property rights accrue to the proposal given in the outline business case.

In the event that DWAF issues a request for proposals for the PPP contemplated by the proposer, or a PPP similar thereto, the proposer is not obliged to submit a bid, nor is the proposer obliged to submit a bid consistent with its outline business case.

The proposer, its employees and agents should not disclose or make public any information relating to the outline business case without the consent of the institution, which consent shall be granted or declined within 30 days of being requested, failing which, shall be deemed to have been granted. Such consent shall not be unreasonably withheld.

Contents of the outline business case for an unsolicited PPP proposal

The outline business case should contain the following information as a minimum:

1. The proponent

- Name, address and full contact details of the person or entity lodging the proposal, or in the case of a consortium, the lead member;
- Brief particulars of the proponent's relevant background and experience; and
- Names and particulars of existing or proposed partners, brief particulars of their background and experience, and an indication of the respective roles they will play in the project.

2. The project concept

A clear outline of the project concept: the product (species), the production facilities, services and the production cycle. This information is to be supported by the sketches, pictures, maps or drawings and technical specifications (where relevant). The following aspects must be clearly defined:

- Location and site (geographical coordinates and reference to the relevant 1:50 000 topographical map together with an explanation / illustration of site and project access);
- Type and standard of the facilities and production methods;
- Identification and planning around the core functional elements of the project (i.e. fingerling supplies, feed supplies, aquaculture skills etc.)
- Novel or unique characteristics, if any of the facilities and production methods;
- Whether the project will be part of an existing chain or brand of projects or facilities or products;
- Proposed size and extent (in production capacity per annum and proposed footprint of the facilities, considering that aquaculture in water will have a three dimensional footprint);
- Amenities and facilities to be provided with reference to existing facilities and facilities that will need to be purposefully developed;
- Description of surrounding land use and compatibility of the project with such land use; and
- Information (if relevant) of regional structure or land use planning and the compatibility of the project herewith.

3. Environmental matters

An outline must be provided of the known or expected impacts that the project will or could have on the environment, and the steps that will be taken to minimise and mitigate such impacts. Within this the following aspects must be addressed:

- Proof must be provided of a pre-application consultation with the relevant environmental affairs authority in terms of compliance with the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the National Environmental Management: Biodiversity Act, 1998 (Act No. 10 of 2004);
- With reference to the previous point the proposer must provide clarity on how they intend achieving compliance with the relevant environmental legislation, with particular reference to the intended process of public and stakeholder identification and consultation;

- The proposer must provide evidence in which the optimal production conditions of the chosen species has been compared to the production environment provided by the proposed project site;
- The water quality requirements for the project and envisaged changes to water quality caused by the project must be determined. This must include the determination of a production capacity for the relevant water body based on a nutrient budget and the possible effects on water quality given the particular addition of nutrients to the water column. Such production capacity determination must consider factors such as faecal sedimentation, extent of the impact, downstream influences and cumulative impacts given other potential water uses and the surrounding land use;
- Proposed measures of impact mitigation, including measures to limit water quality deterioration, waste minimisation and overall management of impacts;
- Explanation of the feeds that will be used (e.g. chemical analysis, hormones etc.), the feed management program and the minimisation of feed related impacts on the environment;
- The extent to which the production species will be processed on site, the fate of the byproducts (fish offal and mortalities) and the minimisation of processing waste and pollution to environment; and,
- Dam safety requirements and possible dam safety impacts that could be caused by the project given the nature of the production facilities and production methods.

4. Commercial rationale

- Explain the commercial rationale of the project in terms of the commercial strengths, weaknesses, opportunities and risks.
- Indicate whether any research or analysis has been conducted that supports the need and desirability for the project concept;
- Summarise the intended target markets and negotiations that have taken place for access into these markets. Provide some information of the market type, historical performance of the market, market security and stability and identify any competition;
- Explain how the proposed product will differentiate itself; and,
- Identify interrelationships with other existing/planned projects, amenities, regional - and local facilities.

5. Operations and management

- Provide the proposed company structure. Provide a ‘family tree’ diagram showing proposed relationships between owner(s), operators, financiers and other relevant parties (regulators, beneficiaries etc);
- Provide resumés of the proposed executive management to indicate there ability in overseeing a project of the particular nature;
- Where an existing chain or group is involved, indicate the nature and extent of the existing operations and involvement in the proposed project;
- Provide details of the postproduction processing from raw product to market. Explain to what extent this will be handled in-house and on location;
- Explain the form in which the product will be marketed and provide details as to the market chain and distribution methodologies; and
- Indicate core functions that will be handled in-house, and those that will be sub-contracted, or out-sourced.

6. Broad based black economic empowerment (BBBEE)

Explain the proposed BBBEE profile and impact of the project with specific reference to:

- Black or Historically Disadvantaged Individual (HDI) equity in the company;
- Black or HDI management;
- Skills requirements and skills development;
- Subcontracting and procurement to black enterprises, HDIs and SMMEs;
- Jobs to be created in the development phase;
- Jobs to be created in the operations phase; and
- Socio-economic impact on the local community(ies). This must include (if applicable) empowerment and socio-economic advantages over and above employment and must highlight any socio-economic threats.

7. Financial viability

- Indicate the expected capital outlay in buildings, plant, equipment and start-up costs etc;
- Explain the financing plan. How much capital will need to be raised, where it will come from (equity, debt, grants) and the expected terms (interest rate, repayment periods, security etc.) of any proposed loans. Indicate if any lenders, sponsors and/or donors have been approached in respect of the project;
- Explain how production costs have been determined, including information on feed costs, performance of the production species and performance / production risk; and
- Provide an indicative and simplified cashflow forecast for the project's first five years, along the following lines:

	Startup	**Yr1**	**Yr2**	**Yr3**	**Yr4**	**Yr5***
	R'000	R'000	R'000	R'000	R'000	R'000
Cash inflows:						
Owner's capital						
Loans received						
Grants received						
Cash from sales and other operating revenue						
Cash from other sources						
Total cash inflow **A**						
Cash outflows:						
Project costs and startup expenses						
Salaries, wages and staff costs						
All other operating costs and expenses						
Loan repayments						
Replacement of equipment & vehicles						
Total cash outflow **B**						
Net cashflows						
[**A** - **B**] before PPP fees and tax						

*** Adjust to proposed PPP period**

8. Technical support

As it is in the interest of DWAF to receive a complete and technically sound outline business case it is recommend that the unsolicited proposer make use of the following contacts if further referrals are required for assistance:

- Aquaculture Association of Southern Africa (Tel: 021-8085838 or Email: info@aasa-aqua.co.za)
- Aquaculture Institute of South Africa (Tel: 021-4307026 or E-mail: lbotes@pgwc.gov.za)