NSW FISHERIES

AQUACULTURE PERMIT APPLICATION GUIDELINES

for

LAND-BASED AQUACULTURE FARMS

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PART I

What is aquaculture?

Aquaculture is the culture of aquatic organisms including fish, molluscs, crustaceans and aquatic plants. Culture implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding and protection from predators. FAO

Prior to 1980, aquaculture in NSW was represented by the oyster, trout and aquarium fish breeding industries. Given the world-wide push to supplement the wild harvest of fish and shellfish, a number of potential species have recently been utilised for commercial aquaculture production. In 1999/2000 the value of the NSW aquaculture industry was worth some $40.5 million. In addition to the large Sydney rock oyster industry, there are over 300 aquaculture permits issued for land-based hatchery and growout facilities to culture a variety of fish, crustaceans, molluscs and algae.

NSW Fisheries aims to promote a viable and environmentally sustainable aquaculture industry. Policies have been developed in relation to site selection, design of facilities, effluent control, translocation and culture of fish species, health management issues and general good aquaculture practice.

Objectives of aquaculture policy

In the context of aquaculture in NSW, Departmental policy will:

- promote the development of a viable and environmentally sustainable aquaculture industry;
- outline directions for the orderly development of a professional aquaculture industry;
- control the introduction, escape and culture of undesirable species;
- control the introduction of diseases and manage disease outbreaks;
- ensure that the use and reuse of water meets environmental objectives;
- guide and assist compliance with government acts and regulations.

A summary of NSW Fisheries aquaculture policy is listed in the Appendix.

Who needs an aquaculture permit?

An aquaculture permit is required under S. 144 of the *Fisheries Management Act 1994, "where a proponent intends to cultivate fish or marine vegetation for the purposes of harvesting the fish or marine vegetation or their progeny with a view to sale; or keeping fish or marine vegetation in a confined area for a commercial purpose (such as a fish-out pond)".*

An aquaculture permit is required whether fish are grown for human consumption, or used in the aquarium trade, for sale to other fish farmers or sale of fish for stocking farm dams or waterways.

An aquaculture permit is not needed where a proponent keeps fish in a pet shop for sale or in an aquarium for exhibition, or where fish are maintained for non-commercial purposes, eg stocking a farm dam with fish for personal recreation use or consumption. However, policy relating to the translocation, importation and stocking of fish to NSW waters must be followed (see NSW Fisheries Policy and Guidelines - Aquatic Habitat Management and Fish Conservation 1998).

Intensive Vs extensive aquaculture permits

The *Fisheries Management Act 1994* introduced a classification system for aquaculture permits based on the activity (grow-out vs hatchery) and the intensity of farming. In addition to the traditional aquaculture permit issued for constructed ponds with high stocking rates and feed input, there has been provision made to recognise that extensive aquaculture (no feed or nutrient input), often conducted in existing farm dams, can also be an important contributor to the aquaculture industry of NSW. A summary of NSW Fisheries aquaculture permits is listed in the Appendix.

Broad criteria for establishing a native freshwater fish/crayfish farm

As a broad summary, aquaculture farms must:

- have a reliable supply of good quality water - a 40Ml/ha/yr water budget is recommended for intensive farms.
- be constructed above the 1/100 year flood level for eastern drainage sites.
- be constructed so not inundated by 1/100 year flood on western drainage sites.
- not be constructed in a waterway.
- not release effluent to waterways.
- retain effluent - effluent may be stored, re-used or irrigated (with approval).
- screen pond outlets to stop escape of fish/crayfish.
- prevent the escape of disease from the farm - have the ability to isolate and quarantine the ponds.
- have an adequate buffer zone between the development and waterways (minimum 50m).
- have suitable soil for water holding and the area must not be prone to contamination.

- be purpose built using earthen ponds, recirculation tanks, constructed raceways, aquaria or floating cages for intensive aquaculture (using supplementary feed).
- not use constructed farm dams for intensive aquaculture. Extensive aquaculture (no supplementary feeds used) may be permitted in constructed farm dams isolated from waterways (including ephemeral waterways).

Completing an aquaculture permit application form

Completing an aquaculture permit application form allows NSW Fisheries to assess the technical viability of a proposal in terms of the operators expertise and to consider whether the proposal will be environmentally sustainable. It is also a useful document to give to other government agencies to assist assess the development. Failure to achieve rapid approval for an application has often been the result of poorly prepared applications that lack requested information or fail to comply with relevant policy.

Steps to complete a NSW Fisheries aquaculture permit application:

* Discuss your application with Aquaculture Administration with NSW Fisheries (02) 4982 1232 to ensure that the proposal complies with NSW Fisheries policies. Obtain copies of relevant NSW Fisheries policies and advisory information.

* Consider the checklist *"Is the site suitable for aquaculture?"* in the aquaculture permit application form.

* Discuss your proposal with relevant industry associations and consider undertaking an aquaculture training course.

* Visit well established private sector aquaculture farms or NSW Fisheries Research Stations.

* Complete the appropriate aquaculture permit application form.

* Consider a business plan for the proposal and then complete the Commercial Farm Development Plan attached to the aquaculture permit application form.

* Collate documents, photos and plans requested in the aquaculture permit application form.

Commercial Farm Development Plan

A Commercial Farm Development Plan must be submitted with all permit applications. A guide to writing a commercial farm plan is located on the last page of the permit application form. Note that the economic viability of aquaculture projects remains the responsibility of the proponent. The issuing

of a permit to farm fish does not imply endorsement of the commercial viability of a proposal.

Nominated permit holder

Aquaculture permits are issued in the names of the people nominated on the applications form. In the case of a Corporation, the Secretary may be nominated and a list of Directors is attached to the permit. It is the permit holder's responsibility to ensure that all aquaculture permit conditions and other legislation relevant to the *Fisheries Management Act 1994* are complied with.

Site assessment for an aquaculture permit

Fisheries Officers play a role in the initial assessment of an aquaculture permit application by visiting a proposed site prior to approval and construction. Intensive aquaculture farm (Class D, H and some Class F) permit applications will require a site assessment by a Fisheries Officer prior to an aquaculture permit being issued. Extensive aquaculture farm (Class C, E, F, G and I) permit applications will be assessed on a case by case basis as to whether a site inspection is required.

Fees associated with a NSW Fisheries aquaculture permit

NSW Fisheries application fees

Class C Permit (extensive aquaculture)	$312
Class D Permit (intensive aquaculture)	$520
Class E Permit (Multisite extensive)	$416
Class F Permit (fish-out)	$312
Class G Permit (experimental)	$520
Class H Permit (hatchery)	$520
Class I Permit - (charity)	$52

Where there is an application for more than one aquaculture permit, the total fee required to be paid for those applications is the sum of the highest permit application fee (that applies to any one of those applications) plus $100 for every other application. For example for an application for intensive farm with hatchery and fishout, the fee would equal $520 (Class D) + $100 (class H) + $100 (Class F) a total of $720.

NSW Fisheries annual contributions

In addition to an aquaculture permit application fee, permit holders may be expected to contribute to:

- costs of administering the aquaculture industry (eg site inspections, administration etc).
- costs of environmental monitoring to ensure that aquaculture developments do not impact the environment and testing the quality of fish cultivated.
- costs of carrying out research into aquaculture.

Aquaculture permit holders currently pay an annual research contribution that is allocated to a trust account and administered by the Advisory Council on Aquaculture (ACoA). The Council advises the Minister for Fisheries on the most appropriate way to allocate funds from the trust account for research to benefit the NSW aquaculture industry.

The annual research contribution for Class D and H permit holders is $104 minimum or $21 per hectare of water surface production area (not including water storage or effluent ponds) per annum. Class C, E and F permit holders are charged $104 per annum. Class G and I permits are exempt from the research contribution. Holders of more than two permits pay the highest annual contribution that applies to any one of the permit holders permits.

Permit holders are also required to pay an annual permit fee of $364 per farm. This cost is charged to help pay for all administrative and other NSW Fisheries services rendered to industry.

Conditions of an aquaculture permit

An aquaculture permit is subject to such conditions that are prescribed by the regulations and are specified in the aquaculture permit or as the Minister notifies the permit holder while the permit is in force. See *Aquaculture Permit Standard Conditions* – 7 September 1999.

Conditions include: areas and species cultured, disease notification requirements, effluent provisions, screening requirements, variations to permits, access to stock (broodstock and juveniles) and sale of stock. Aquaculture permits remain in force unless cancelled. Aquaculture permits are not transferable.

NB: If a farm is to be sold, the buyer must make their own application for an aquaculture permit. This should be done prior to settlement of the transaction, to ensure that there are no complications regarding the reissue of the permit.

Advisory information

NSW Fisheries Port Stephens Fisheries Centre
Telephone (02) 4982 1232
Private Bag 1 NELSON BAY NSW 2315
Visit the internet on: www.fisheries.nsw.gov.au
List of aquaculture publications and relevant extension articles
List of NSW Aquaculture Associations

Aquaculture Development Foundation Inc. (02) 4982 2680 phone/fax
PO Box 301 Anna Bay NSW 2316
16 publications for NSW fish farmers

National Fishing Industry Education Centre of TAFE (02) 6644 7353
Locked Bag 5 Grafton, NSW 2460
Courses for aquaculture including the Advanced Certificate in Aquaculture Production (Freshwater)

PART II

Responsibilities of other government agencies

NSW Fisheries is not the only government agency that assesses aquaculture proposals to ensure that they meet guidelines to protect the environment. The construction and operation of an aquaculture facility requires licenses, permits and approvals from several state and local government authorities. Jurisdiction of these authorities depends upon the scale, locality and intensity of the proposal.

Local Government (Council)
for Development Approvals (DA) under Part 4 of the *Environmental Planning and Assessment Act 1979,* and building approvals.

Environment Protection Authority (EPA)
focuses on environmental protection and management of various media including water, air and noise. The EPA considers such issues as construction of ponds and effluent retention ponds, irrigation practices, and monitoring conditions and license limits if production water is released to waterways.

Under the *Protection of the Environment Operations Act 1997*, an intensive aquaculture farm will need an Environment Protection Licence where the water surface production area (including effluent storage area) is >10 hectares or has a water volume used for production and effluent storage of 400 ML.

Activities can be licensed that are smaller than the threshold listed above in situations where individuals come forward voluntarily seeking licenses and protection from pollution of waters. This may apply in the case of some trout and prawn farms where production water is released to waterways, or if production water is irrigated (any species) near 'sensitive' areas. In these instances a Water Licence can be applied for. The need for a water license should be discussed with the EPA prior to lodging an application. Note that a water license issued by the EPA should not be confused with a water extraction license issued by DLWC (see below).

The *Pollution Control Regulation 1998,* describes a new licensing scheme with a load based fee structure based on the quantity or quality of the emissions released from a facility. Licensing fees will be based on the type of activity, type of pollutants discharged, the assessable load discharged, the sensitivity of the receiving environment, a pollution weighting for each pollutant and also considers the terms of any pollution reduction agreement. This should be linked with Environment Protection Licenses by the end of 1999. Based on the 'polluter pays' principle, discounts on license fees will be made available by minimising effluent loads and maximising water re-use.

Department of Land and Water Conservation (DLWC)
for advice and approvals relating to: non-metropolitan water supply, including surface and groundwater, design of dams and reticulation systems, soil types and characteristics, design of sediment/erosion control structures, floodplain management, land rehabilitation schemes and wastewater management and disposal techniques. It is a DLWC requirement that there is a suitable buffer zone between any development and waterways.

National Parks and Wildlife Service (NPWS)
considers land clearing or impacts on natural vegetation and fauna, Threatened Species legislation and whether sites of Aboriginal heritage significance may be affected. NPWS hold a register of flora and fauna and aboriginal sites that can be consulted when considering an aquaculture site.

Under the *Threatened Species Conservation Act 1995,* proponents will need to consider the 8 point test to determine whether a Species Impact Statement (SIS) is required if the proposed site is on "critical habitat", or is likely to affect threatened species or their habitats. See Appendix for 8 point test.

Department of Urban Affairs and Planning (DUAP)
are consulted for concurrence if the proposal impacts on State Environmental Planning Policy's (SEPP's) or where Director's requirements are needed for an Environmental Impact Statement (EIS). DUAP administers the *Environmental Planning and Assessment Act 1979* through local Councils and government agencies. DUAP developed Schedule 3 of the *Environmental Planning and Assessment Act Regulation 1994,* to describe where an intensive aquaculture proposal requires an EIS under Part 4 of the *Environmental Planning and Assessment Act 1979*. DUAP have also developed, 'Aquaculture in land-based facilities - EIS Guideline' to assist prepare an EIS.

Where a proponent needs to consider whether an aquaculture proposal could need an EIS under part 5 of the *Environmental Planning and Assessment Act 1979*, consult 'Is an EIS required?' DUAP 2nd Edition 1996.

Department of Agriculture
will need to be consulted if the development is on land with high agricultural value or if the proposal will cause dislocation to the agriculture industry. They are concerned with the level of site disturbance and the ability to rehabilitate the site. The Department is also concerned with agricultural chemicals that may affect the site.

NSW Agriculture may also assess the proposed site for compatibility with other existing adjoining land uses, the need for buffers to minimise potential conflict, and may consider the cumulative effects of the development.

Applying for an Aquaculture Permit

See attached flowchart (Appendix)

STEP ONE

◊ Discuss the proposal with Council and determine whether a DA is required.

◊ If the answer is yes - the proposal will fall under Part 4 of the *Environmental Planning and Assessment Act 1979,* and be assessed under the **Integrated Assessment Approvals Process** and **Council** will process your applications (DA and Statement of Environmental Effects (SEE), NSW Fisheries Aquaculture Permit, EPA, DLWC and NPWS applications).

◊ If the answer is no - the proposal will fall under Part 5 of the *Environmental Planning and Assessment Act 1979,* and **NSW Fisheries** will process your application.

NO CONSTRUCTION WORK OR INTRODUCTION OF STOCK SHOULD BE UNDERTAKEN UNLESS ALL RELEVANT APPROVALS AND PERMITS HAVE BEEN OBTAINED

Integrated Assessment Approvals Process - Part 4 of the Environmental Planning and Assessment Act 1979

For most intensive aquaculture farm developments, the activity will be scheduled in the Local Environment Plan (LEP) of a Shire Council. This will entail a DA to be lodged with Council. Council will also consider whether the proposal triggers an EIS or an SIS. If an EIS is not triggered by the schedule below, an SEE will be lodged with the DA.

The *Environmental Planning and Assessment Regulation 1994* describes where intensive aquaculture is a designated development (EIS required) if:

- the site is located in areas of acid sulphate soils or above a watertable less than 3 metres below the surface.
- the development is larger than 2ha or 40ML capacity and is located in a 1/100 year flood zone, or releases effluent to waterways (a waterbody, wetland or groundwater).
- the development is larger than 10ha or 400ML water capacity.
- the proposal involves farming a species of fish not indigenous to NSW if located within 500m of a waterway or on a floodplain (includes extensive culture).

Council will also consider whether an SIS is required by assessing the 8 point test, *S.94 Threatened Species Conservation Act 1995.*

Under the Integrated Assessment Approvals Process, Council is responsible for co-ordinating comments and conditions for a proposal from relevant agencies under a strict time frame.

STEP TWO

Seek Council advice whether an EIS or SIS is required. Seek Council Advice on which government agencies need to be consulted. Consider any relevant SEPP's.

STEP THREE

Seek government agencies advice prior to lodging DA. Promote the use of a focus planning meeting with relevant agencies on-site.

STEP FOUR

Lodge DA/SEE and other relevant information, with Council. All information contained within the NSW Fisheries Aquaculture Permit Application Forms should also be lodged with council.

Council will consider comments and conditions from other government agencies and determine the application. Once a copy of the Development Consent has been sighted by NSW Fisheries and providing that conditions of that Consent have been met, an aquaculture permit will be issued.

Construction of the facility can then commence.

Assessment by NSW Fisheries under Part 5 of the Environmental Planning and Assessment Act 1979

Where aquaculture is not listed in an LEP, a DA may not be required and the development will be assessed by NSW Fisheries.

The appropriate aquaculture permit application form will needs to be completed which will include a Review of Environmental Factors (REF) and an assessment as to whether the 8 point test is triggered (see Appendix). The REF is not an EIS, however if in the opinion of NSW Fisheries there are likely to be significant environmental effects, an EIS may subsequently be requested.

Once an environmental impact assessment (consideration of REF and SIS factors) has been completed by NSW Fisheries, and all relevant approvals have been attained, an aquaculture permit will be issued.

Construction of the facility can then commence.

APPENDIX:

NSW Fisheries aquaculture permits

Class A and B Permits - aquaculture undertaken in marine waters
Not covered in this Guideline

Class C Permit - extensive aquaculture
Class C permits allow extensive aquaculture to be undertaken. By careful site and species selection and by ensuring that there is no nutrient input to dams/ponds, there should be minimal impact on the environment from this activity. Limiting the stocking density of fish to a level that is sustained by natural feed in the dams/ponds will avoid problems associated with intensive farming, eg poor water quality, effluent release or disease problems.

Class C permits will be approved for constructed ponds and existing constructed farm dams mainly used for stock watering or irrigation but not for billabongs or ephemeral lakes connected to natural waterways. Class C permits will allow the aquaculture of certain species outside their natural range as long as they do not escape to waterways.

There is to be no nutrient input of either feed (eg pelletised feed) or fertiliser to the dams/ponds once full of water. Lining with hay or planting crops into the bottom of dams/ponds may be allowed prior to utilising them for aquaculture.

Class D Permit - intensive aquaculture
Class D permits authorise intensive aquaculture to be undertaken. To ensure viability and environmental sustainability more attention needs to be placed on water availability, water treatment/reuse, effluent retention, farm design and best aquaculture practice.

NSW Fisheries will not promote the use of farm dams for intensive aquaculture because of the potential for impact on the environment. In most cases farm dams are not purpose built for intensive aquaculture, usually have inadequate water supply and usually have no provision to prevent overflow and release of effluent or stock from the dam. Problems associated with farm dams include: organic matter can be washed into farm dams and this can lead to oxygen and turbidity problems, most dams have no outlet from the dam floor so there is no capacity to dry out the dam to kill off disease or to allow work on the bottom of the pond to remove any build up of organic matter and off-flavour of fish can result from poor water quality in freshwater dams. Harvesting can also be a problem in that netting may not extract all the fish in a farm dam, and during harvest it is advisable to be able to remove the last 10cm of water from a pond in less than 1 hour to avoid stressing fish with poor water quality.

Class D permits will be approved for constructed ponds (earthen, concrete, plastic lined), intensive tanks, raceways, aquaria and floating cages. Class D

permits will not be approved for constructed farm dams. Intensive growout and effluent storage facilities must not be constructed in natural waterways. Intensive facilities must have a reliable supply of good quality water - 40 ML/ha/yr is the recommended minimum water budget required for earthen pond culture.

Class E Permit - extensive multi-site aquaculture

Class E aquaculture permits are an expansion of Class C aquaculture permits allowing extensive aquaculture to be undertaken on multiple properties under an agreement with the landholder to lease the water in ponds or constructed farm dams.

Class E permits allow aquaculture to be undertaken by individuals or corporations that do not own constructed farm dams but can gain access to them through leasing agreements. This should allow non-landowners entry to the aquaculture industry.

Class F Permit - fishouts

Fishout facilities offer aquaculture farms opportunity to diversify activities and supplement farm income with tourism. Fish cultured extensively or intensively in confined areas offer excellent opportunities for anglers. Fishouts can be associated with existing aquaculture farms or established as an adjunct to tourist facilities, eg farm-stays.

For fishout facilities operated on intensive farms, permit conditions require all fishout operators to provide fishing equipment that is used solely at the fishout facilities in order to reduce any risk of introducing disease to the farm or spreading it from the farm. Privately owned gear may be used on extensively operated farms.

Class G Permit - experimental aquaculture

The *Fisheries Management Act 1994* does not permit proponents wishing to experimentally culture fish to sell them at the end of the trial without an aquaculture permit. The Class G permit promotes the trialing of aquaculture sites, species and associated technologies to assess commercial and biological viability. In many cases, the activity is proposed for industrial sites or other established facilities where often an existing development consent covers the activity.

The Class G permit offers proponents the opportunity to trial aquaculture on a limited scale, under appropriate conditions for a defined time period.

Class H Permit - hatcheries

The process of domestication of farmed animals and plants has involved increasing levels of environmental manipulation and selective breeding and it is through this process that much of modern agriculture has developed. Increasingly, the developments of modern aquaculture has focused on this area of breeding for commercial gain.

Generally, the development of an aquaculture industry depends on the reliable supply of juveniles. There is also an increased focus on marine and freshwater hatcheries to produce fingerlings for conservation purposes and for stock enhancement of waterways for recreational and commercial fishers.

However, the establishment and operation of a hatchery for any aquaculture species has serious potential hazards, both from an environmental and economic perspective. The major issues of concern are the following:

a) broodstock supply

The initial source of spawners/broodstock in any aquaculture species is from the wild. However, for some NSW species, particularly certain freshwater native fish, the availability of broodstock from nature is diminishing because of environmental degradation and other factors which have reduced natural populations in recent years.

In many species that are cultured here and abroad, broodstock programs are a very valuable and costly part of an overall hatchery development. The same is true in modern animal husbandry. Therefore, the hatchery application form has considerable emphasis on broodstock facilities. Broodstock may not be accessed from the wild without a collection permit other than by purchasing fish from licensed commercial fishers.

b) disease and pest transmission

Since the purpose of a hatchery is to provide juveniles for ongrowing in other areas, it follows that a hatchery also has a serious potential for disease transmission, both to other aquaculture farms and into the natural environment. Inadequate and poorly designed facilities, lack of quarantine procedures/safeguards, poor understanding of disease origin, prevention and remedy, combined with a general lack of experience and/or training in hatchery procedures are the common reasons for such disease catastrophes. These important links in a hatchery operation are also emphasised in the hatchery application form and are carefully considered by NSW Fisheries in the approval of a Class H permit.

c) genetics

The application of genetic principles and appropriate management at hatcheries are extremely important in both stocking programs and selective breeding programs.

Class I Permit - charity permits

Charity permits authorise fishout operations where proceeds accrued from the sale of fish are intended for charitable (non-profit) purposes. The fishout occurs usually in the local swimming pool and in some cases have been initiated in streams recently stocked with market size fish.

NSW Fisheries aquaculture policy

Draft Landbased Aquaculture Farms Policy. See - *Version 1 August 1998*

Aquatic Habitat Management and Fish Conservation 1998 - Policy and Guidelines
Proponents should contact NSW Fisheries to discuss the specific requirements in relation to species and site selection.

Specific NSW Fisheries policies

Aquaculture Permits for Silver Perch
The Ministerial Silver Perch Taskforce developed this policy in 1994 to promote a professional, environmentally sustainable silver perch industry in NSW using best practice aquaculture techniques. This followed a moratorium on approving silver perch permits in late 1993 where many proponents presented poorly prepared applications, often based on the belief that intensive farm dam culture was viable.
See **-** *NSW Fisheries Policy Paper A94/2*, version August 1994 and updated 18 September 1995.

Introduction and Translocation
This policy describes controls relating to the introduction and translocation of fish species and fish stockings to waterways and farm dams.
See - NSW Fisheries Policy Paper R 94/1 - August 1995.

Stocking and Harvesting Fish in Farm Dams
This policy was developed to promote the extensive culture of fish species in constructed farm dams under a Class E permit.
See **-** *NSW Fisheries Policy Paper A94/2*, August 1994, version updated 17 July 1995.

Barramundi Farming
This policy was established to allow the culture of barramundi in NSW under strict risk minimisation conditions, with criteria describing site location, construction and treatment and disposal of effluent.

Eel Aquaculture
Promotes the establishment of an eel aquaculture industry in NSW modelled on the silver perch policy. It also describes the process for accessing glass eel stocks from selected commercial glass eel harvesters. The importation of shortfin elvers from Tasmania is also regulated by an enclosed import protocol.
See -*NSW Fisheries Policy Paper* - A98/1, 13 February 1998

Draft Management of EHNV in NSW
Describes the establishment of a quarantine area for Epizootic Haematopoietic Necrosis Virus (EHNV) in which there is free movement of salmonid species. Movement of fish outside this zone would require disease testing for EHNV.
See - *NSW Fisheries Policy Paper* - A96/1, 3 February 1998

Definitions

“Broodstock” means parent fish used to produce offspring.

“DA” means Development Application.

“EIS” means an Environmental Impact Statement.

“Extensive” means aquaculture undertaken without providing supplementary food for fish that are being cultured.

"Fish" means the eggs, milt, larvae, juveniles and adults of the species authorised by a permit.

“Floodplain” means the flood plain level nominated in an LEP or those areas inundated as a result of a 1/100 year flood event.

“Food” includes any form of nutrient.

“Grow out” means facilities for growing fish to market size.

“Hatchery” means a facility for the maintenance and maturation of broodstock, spawning (natural and artificial) and larval rearing to fingerling or post-larval stage.

“Intensive” means aquaculture undertaken by providing supplementary food for fish that are being cultured.

“Nursery” means facilities for growing small juvenile size, eg fry to fingerling of weight 0.5g to 50g.

"Premises" means all or part of the lands referred to in a permit and includes all structures thereon.

“REF” means a Review of Environmental Factors which identifies and evaluates the impact of an activity under Part 5 of the EP&A Act. If the impacts are not considered significant then an EIS is not required. An REF documents an environmental management strategy.

“SEE” means a Statement of Environmental Effects which accompanies a DA for non-designated developments. It should demonstrate that environmental impacts have been considered and should set out steps to be undertaken to protect the environment or mitigate harm.

"Sell" includes -
a) sell by wholesale, retail, auction or tender;
b) barter or exchange;
c) supply for profit;
d) offer for sale, receive for sale, or expose for sale;
e) consign or deliver for sale;
f) have in possession for sale; or
cause, or allow any of the above to be done.

“SEPP” means State Environment Planning Policy.

"Waters" means all waters that are within the limits of the State and include rivers, creeks, lakes, lagoons and artificial dams, tanks, reservoirs, ponds, canals, channels, waterways, estuaries and oceans.

“Waterways” means a wetland, waterbody or groundwater.

Factors to consider in an REF, and whether an SIS is required

Review of Environmental Factors

(a) Any environmental impact on a community;

(b) any transformation of a locality;

(c) any environmental impact on the ecosystems of the locality;

(d) any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality;

(e) any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical scientific or social significance or other special value for present or future generations;

(f) any impact on the habitat of protected or endangered fauna (within the meaning of the National Parks and Wildlife Act 1974)

(g) any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air;

(h) any long-term effects on the environment;

(j) any risk to the safety of the environment;

(k) any reduction in the range of beneficial uses of the environment;

(l) any pollution of the environment;

(m) any environmental problems associated with the disposal of waste;

(n) any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply;

(o) any cumulative environmental effect with other existing or likely future activities.

The 8 point test needs to be considered in relation to threatened species conservation

(a) in the case of a threatened species, whether the life cycle of the species is likely to be disrupted such that a viable local population of the species is likely to be placed at risk of extinction,

(b) in the case of an endangered population, whether the life cycle of the species that constitutes the endangered population is likely to be disrupted such that the viability of the population is likely to be significantly compromised,

(c) in relation to the regional distribution of the habitat of a threatened species, population or ecological community, whether a significant area of known habitat is to be modified or removed,

(d) whether an area of known habitat is likely to become isolated from currently interconnecting or proximate areas of habitat for a threatened species, population or ecological community,

(e) whether critical habitat will be affected,

(f) whether a threatened species, population or ecological community, or their habitats, are adequately represented in conservation reserves (or similar protected areas) in the region,

(g) whether the action proposed is of a class of action that is recognised as a threatening process,

(h) whether any threatened species or ecological community is at the limit of its known distribution.

Note that fish currently protected by Threatened Species Legislation include the trout cod, the eastern freshwater cod, the Oxleyan pygmy fish, and the honey blue-eye.

SETTING UP AN AQUACULTURE FACILITY
GOVERNMENT REQUIREMENTS

Stage 1
Preliminary enquiries