

Inland Fisheries Service

Fish Farm Biosecurity Management Plan (FFBMP) Guidelines (salmonids)

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I. Policy Context

The Director of Inland Fisheries (Director) under the *Inland Fisheries Act 1995* (IFA), has responsibility for the licensing of fish farming and regulating the transport of live freshwater fish.

Amendments to the *Environmental Management and Pollution Control Act 1994* has resulted in a requirement for fin fish farms to hold an Environmental Licence in addition to a Fish Farm Licence under the IFA. Applicants should contact the Environment Protection Authority (EPA) directly in relation to the Environmental Licence requirements.

To ensure that each licensed fish farm meets high and consistent standards, the Director requires that:

- an applicant for a new Fish Farm Licence, or
- a current Fish Farm Licence holder on transfer, variation or renewal

must develop, provide for approval and subsequently implement a Fish Farm Biosecurity Management Plan (FFBMP).

The recent amendments to the *Biosecurity Act 2019* and the implementation of the *Biosecurity Program: Tasmanian Salmon Industry* has introduced changes to the biosecurity details required in a FFBMP.

FFBMPs will be assessed by the Director and the Chief Veterinary Officer for approval.

The Licensee must, if the Director by notice requires for reasonable cause, amend the FFBMP in such ways and within such time as the Director indicates or specifies in the notice.

The following sections provide an explanatory guide to the standard information required for a FFBMP:

These contents are indicative only: in some cases it may be necessary to include additional information. Applicants are therefore encouraged to seek advice from the Inland Fisheries Service (IFS) on the requirements for individual operations.

2. Fish Farm Information

Include information on the background and purpose of the proposed or current fish farm activity, including its objectives.

Overview

- Specify the species of fish to be farmed (common and scientific names)
- Identify the source of stock
- Specify the stocking densities and proposed production level for each life history stage
- Specify the total maximum standing biomass.

Location of Premises

- Premises address
- River catchment and primary water supply
- Describe the area of land on which the fish are to be farmed
- Describe the zoning of land or waters on or in which the fish are to be farmed (that is, the suitability of the land or waters for the intended purpose and its ownership or tenure)
- Provide a map and coordinates of the proposed site.

Fish Farming Methods

Describe in detail the fish farming methods that will be used; for example, culture technology, production system type and intensity, water supply (flow-through or recirculating) and discharge system, including treatments (filtration), culture units (tanks, ponds, cages).

Layout of the fish farm

Provide a diagram of the fish farm (e.g. engineering and building plans if available).

The diagram (or separate diagrams) should contain the following (as applicable):

- water treatment and movement within the areas of the fish farm supply and discharge system (including recirculation) and water exchange percentage;
- areas within the fish farm (e.g. quarantine, hatchery, nursery, grow out);
- stock movement/flow through the fish farm (e.g. transferring stock from hatchery to nursery/grow out areas);
- location of discharge points;
- infrastructure including tanks, drainage, covered areas and storage areas;
- escape prevention measures (i.e. screening of waste water outlet pipes);
- residue disposal areas;
- vehicle and equipment storage;
- site security (include locations of onsite lockable doors and gates), and
- locations of footbaths and disinfection areas.

3. Biosecurity

Effective biosecurity procedures are vital to reduce the risk of outbreak and transmission of diseases and introduction of pest species.

The purpose of biosecurity is to:

- reduce the risk of farmed fish, pathogens, or aquatic pest species being introduced to a fish farm;
- reduce the risk of farmed fish, pathogens, or aquatic pest species escaping from a fish farm; and
- develop suitable containment and emergency procedures should farmed fish, pathogens, or aquatic pest species enter or escape from the fish farm.

Implementation of the *Biosecurity Program: Tasmanian Salmonid Industry* (the Program) and commencement of the *Biosecurity (Salmonid Biosecurity Zones) Regulations 2022* (the Regulations) introduces a minimum standard for biosecurity in freshwater hatcheries (flow-through and recirculated aquaculture systems) which will be audited and enforced under the *Biosecurity Act 2019*.

However, the Program and Regulations do not derogate from the IFS current system of assessment and approvals, and IFS Officers will continue to manage biosecurity in all inland freshwater facilities. This means biosecurity management of broodstock and growth of eggs through to smolt in freshwater facilities and the approval process for transfer of smolt to sea will continue to be provided through IFS regulatory instruments and process.

These Guidelines have been updated with indications to specific sections of **Schedule 2 – Freshwater Operations Standards** of the Program for ease of reference. It is recommended that when developing the FFBMP, these Guidelines are followed in direct consultation with the current version of the [Biosecurity Program: Tasmanian Salmonid Industry](#).

Table 1. is designed to assist when reconciling the relevant parts of the Program with the FFBMP Guidelines. In addition to the table below, Part 1 and Part 2 of Schedule 2, (Application and Interpretation, and Compliance with Legislative Requirements, respectively) apply consistently to all inland freshwater facility operators.

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Table I.

Specific section of the FFMP Guidelines	Relevant Part of Schedule 2 – Freshwater Operations Standards of the Program
<p>3.1 Administrative Biosecurity Procedures:</p> <p>Record Keeping</p>	<p>PART 2: Compliance with legislative requirements</p> <p><i>FOS 4. Compliance with general biosecurity duty</i></p> <p><i>FOS 5. General compliance with legal directions</i></p> <p>PART 3: Industry Co-regulation and collaboration</p> <p><i>FOS 7. Salmonid industry biosecurity certification scheme</i></p> <p><i>FOS 8. Biosecurity management plans</i></p> <p>PART 4: Monitoring, Reporting, and Record Keeping</p> <p><i>FOS 11. Fish health monitoring</i></p> <p><i>FOS 12. Water quality monitoring</i></p> <p><i>FOS 13. Detection of biosecurity events</i></p> <p><i>FOS 14. Notification of biosecurity events</i></p> <p><i>FOS 15. Fish movement records</i></p> <p><i>FOS 16. Mortality records</i></p> <p><i>FOS 17. General record keeping</i></p> <p>PART 5: Stocking</p> <p><i>FOS 18. Prevention of fish escapes</i></p> <p>PART 6: Input Management</p> <p><i>FOS 19. Suitability of salmonid feed</i></p> <p><i>FOS 20. Freshwater used in freshwater facilities</i></p> <p><i>FOS 21. General regulatory compliance for therapeutants</i></p>

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Specific section of the FFMP Guidelines	Relevant Part of Schedule 2 – Freshwater Operations Standards of the Program
	<p><i>FOS 22. Management of environmental residues</i></p> <p><i>FOS 23. Notification, testing and other requirements relating to antibiotics</i></p> <p>PART 8: Movements of live fish</p> <p><i>FOS 25. Veterinary assessment before movement of fish into or from freshwater facility to another freshwater environment</i></p> <p><i>FOS 26. Egg disinfection</i></p> <p><i>FOS 27. Certification of fish from freshwater facility to marine environment</i></p> <p><i>FOS 28. Pre-movement inspection of fish to be moved from freshwater facility</i></p> <p><i>FOS 29. Decontamination of live fish transport vehicles</i></p>
<p>3.1 Administrative Biosecurity Procedures:</p> <p>Equipment and Vehicles</p>	<p>PART 7: Dealings with salmonid equipment</p> <p><i>FOS 24. Movement of salmonid equipment</i></p> <p>PART 8: Movements of live fish</p> <p><i>FOS 29. Decontamination of live fish transport vehicles</i></p>
<p>3.2 Staff, contractors, and visitors</p>	<p>PART 2: Compliance with legislative requirements</p> <p><i>FOS 4. Compliance with general biosecurity duty</i></p> <p><i>FOS 5. General compliance with legal directions</i></p> <p>PART 3: Industry co-regulation and collaboration</p> <p><i>FOS 8. Biosecurity management plans</i></p> <p><i>FOS 9. Staff training and competency</i></p> <p><i>FOS 10. Internal communications</i></p>

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Specific section of the FFMP Guidelines	Relevant Part of Schedule 2 – Freshwater Operations Standards of the Program
	<p>PART 4: Monitoring, Reporting, and Record Keeping</p> <p><i>FOS 13. Detection of biosecurity events</i></p> <p><i>FOS 14. Notification of biosecurity events</i></p>
<p>3.3 Access to and movement in the fish farm</p>	<p>PART 3: Industry co-regulation and collaboration</p> <p><i>FOS 7. Salmonid industry biosecurity certification scheme</i></p> <p><i>FOS 8. Biosecurity management plans</i></p> <p><i>FOS 9. Staff training and competency</i></p> <p><i>FOS 10. Internal communications</i></p>
<p>3.4 Operational biosecurity procedures:</p> <p>Broodstock and seedstock</p>	<p>PART 4: Monitoring, Reporting, and Record Keeping</p> <p><i>FOS 11. Fish health monitoring</i></p> <p><i>FOS 12. Water quality monitoring</i></p> <p><i>FOS 13. Detection of biosecurity events</i></p> <p><i>FOS 14. Notification of biosecurity events</i></p> <p><i>FOS 15. Fish movement records</i></p> <p><i>FOS 16. Mortality records</i></p> <p><i>FOS 17. General record keeping</i></p> <p>PART 6: Input management</p> <p><i>FOS 20. Freshwater used in freshwater facilities</i></p> <p>PART 8: Movements of live fish</p> <p><i>FOS 25. Veterinary assessment before movement of fish into or from freshwater facility to another freshwater environment</i></p>

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Specific section of the FFMP Guidelines	Relevant Part of Schedule 2 – Freshwater Operations Standards of the Program
	<p>FOS 26. Egg disinfection</p> <p>FOS 27. Certification of fish from freshwater facility to marine environment</p> <p>FOS 28. Pre-movement inspection of fish to be moved from freshwater facility</p> <p>FOS 29. Decontamination of live fish transport vehicles</p> <p>PART 9: Waste management</p> <p>FOS 30. General requirements for disposal of salmonid waste</p> <p>FOS 31. Removal of fish mortalities</p> <p>FOS 32. Storage of mortalities</p> <p>FOS 33. Disposal of fish transport waste</p> <p>FOS 34. Mortality and processing waste not to be used as bait</p> <p>FOS 35. Blood water</p> <p>FOS 36. Secure storage and disposal of wastewater</p>
<p>3.4 Operational biosecurity procedures:</p> <p>Feed</p>	<p>PART 6: Input Management</p> <p>FOS 19. Suitability of salmonid feed</p>
<p>3.5 Quarantine and testing areas</p>	<p>PART 4: Monitoring, Reporting, and Record Keeping</p> <p>FOS 11. Fish health monitoring</p> <p>FOS 12. Water quality monitoring</p> <p>FOS 13. Detection of biosecurity events</p> <p>FOS 14. Notification of biosecurity events</p> <p>PART 6: Input Management</p> <p>FOS 21. General regulatory compliance for therapeutants</p>

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Specific section of the FFMP Guidelines	Relevant Part of Schedule 2 – Freshwater Operations Standards of the Program
	<p><i>FOS 22. Management of environmental residues</i></p> <p><i>FOS 23. Notification, testing and other requirements relating to antibiotics</i></p> <p>PART 7: Dealings with salmonid equipment</p> <p><i>FOS 24. Movement of salmonid equipment</i></p>
3.6 Prevention of escapes and incidental transfers	<p>PART 5: Stocking</p> <p><i>FOS 18. Prevention of fish escapes</i></p>
<p>3.7 Biosecurity Incident and emergency procedures:</p> <p>Disease incidents</p>	<p>PART 2: Compliance with legislative requirements</p> <p><i>FOS 4. Compliance with general biosecurity duty</i></p> <p><i>FOS 5. General compliance with legal directions</i></p> <p>PART 3: Industry co-regulation and collaboration</p> <p><i>FOS 7. Salmonid industry biosecurity certification scheme</i></p> <p><i>FOS 8. Biosecurity management plans</i></p> <p><i>FOS 9. Staff training and competency</i></p> <p><i>FOS 10. Internal communications</i></p> <p>PART 4: Monitoring, Reporting, and Record Keeping</p> <p><i>FOS 11. Fish health monitoring</i></p> <p><i>FOS 12. Water quality monitoring</i></p> <p><i>FOS 13. Detection of biosecurity events</i></p> <p><i>FOS 14. Notification of biosecurity events</i></p>

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Specific section of the FFMP Guidelines	Relevant Part of Schedule 2 – Freshwater Operations Standards of the Program
	<p>PART 8: Movements of live fish</p> <p><i>FOS 25. Veterinary assessment before movement of fish into or from freshwater facility to another freshwater environment</i></p> <p><i>FOS 26. Egg disinfection</i></p> <p><i>FOS 27. Certification of fish from freshwater facility to marine environment</i></p> <p><i>FOS 28. Pre-movement inspection of fish to be moved from freshwater facility</i></p>
<p>3.7 Biosecurity Incident and emergency procedures:</p> <p>Escape and incidental transfer incidents</p>	<p>PART 5: Stocking</p> <p><i>FOS 18. Prevention of fish escapes</i></p>
<p>3.7 Biosecurity Incident and emergency procedures:</p> <p>Emergency (e.g. extreme weather events)</p>	<p>PART 3: Industry co-regulation and collaboration</p> <p><i>FOS 8. Biosecurity management plans</i></p> <p>PART 8: Movements of live fish</p> <p><i>FOS 25. Veterinary assessment before movement of fish into or from freshwater facility to another freshwater environment</i></p> <p><i>FOS 27. Certification of fish from freshwater facility to marine environment</i></p> <p><i>FOS 28. Pre-movement inspection of fish to be moved from freshwater facility</i></p> <p>PART 9: Waste management</p> <p><i>FOS 30. General requirements for disposal of salmonid waste</i></p> <p><i>FOS 31. Removal of fish mortalities</i></p> <p><i>FOS 32. Storage of mortalities</i></p> <p><i>FOS 33. Disposal of fish transport waste</i></p> <p><i>FOS 34. Mortality and processing waste not to be used as bait</i></p>

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3.1. Administrative Biosecurity Procedures

Record keeping

Provide record keeping and communication procedures, which should include but are not limited to:

- transport approvals of live fish under SI28A of the IFA;
- health certificates;
- biosecurity certificates;
- quarantine records;
- disease management records;
- reporting of fish escapes;
- reporting of unusual mortalities;
- reporting of a notifiable disease or suspicion of a notifiable disease;
- daily feed records;
- internal and external stock transfers;
- routine stock and fish farm inspections;
- fish farm access records (staff, contractors and visitors);
- prophylactic treatments and the use of chemicals and pharmaceuticals (i.e. vaccines, antibiotics, hormones); and
- internal recording and reporting of biosecurity issues.

Equipment and vehicles

Provide biosecurity procedures that include but are not limited to:

- the use of separate equipment for each fish farm area, including storage and maintenance (particular attention to quarantine and testing areas);
- maintenance of tanks (including water quality meters, pumps, mort bins, netting, screens);
- all used aquaculture gear (i.e. grading, harvesting, feed equipment, nets, harvesting bins, baskets);
- bird and pest netting;
- use of separate broodstock collection equipment;
- cleaning and disinfection, including products and their application; and
- vehicle and vessel inspections; loading and unloading areas.

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3.2. Staff, contractors and visitors

Provide details on the nomination of a Biosecurity Manager (to be responsible for ensuring biosecurity procedures are implemented)

Provide details on staff procedures. These procedures should include but are not limited to:

- participating in an onsite induction (who will deliver induction/training);
- ongoing training and evaluation (including training to identify diseases);
- individual staff responsibilities (i.e. stock feeding, stock transfer, waste management);
- how to record and report biosecurity related issues;
- biosecurity emergency procedures; and
- monitoring the effectiveness of the biosecurity section of the FFBMP including updates and reviews.

3.3. Access to and movement in the fish farm

Monitoring and regulating access to the fish farm is an important aspect of biosecurity to prevent the introduction and spread of disease. To help prevent the introduction of diseases, equipment and procedures should be implemented for disinfection. These include the use of footbaths, hand-washing stations, net disinfection stations, showers and vehicle disinfection stations.

Provide biosecurity facility access and movement procedures, which include but are not limited to the management of:

- staff, contractors and visitor access, including area restrictions;
- clothing requirements and specified changing areas;
- decontamination (entering and leaving specific fish farm areas);
- security, including unauthorised access alarms, fences, lockable gates and doors;
- signage at entrances explaining biosecurity rules of the fish farm; and
- access to the FFBMP and emergency contact numbers.

3.4. Operational Biosecurity Procedures

Broodstock and Seedstock

Obtaining healthy fish from a reputable supplier or source is critical for successful fish farm production. Before obtaining fish from an outside source, it is important to determine background information, such as, any health certificates, biosecurity certificates, disease issues, origin, prior health examinations, disease testing or treatments.

In all cases, the movement of live fish to and from a fish farm will require a transport approval under S128A of the IFA and a biosecurity certificate under PART 8 of the Program.

Provide biosecurity procedures that include but are not limited to:

- the source and transport of live fish including eggs, fry, smolts and broodstock
- isolation of introduced broodstock and, or, eggs, fry and smolts (include physical and epidemiological separation);
- monitoring changes in health status;
- disposal of any dead fish;
- vector and predator control; and
- source and disposal of transport water.

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Feeds

Provide biosecurity procedures for feed handling and storage processes, which should include but are not limited to managing:

- feed source; feed handling and storage (including pallet cleaning, labelling and dating); and
- feeding processes including avoiding cross contamination.

3.5. Quarantine and testing areas

Describe the fish farm quarantine and disease testing protocols and procedures noting that any new stock regardless of source should be quarantined or held separate from resident stock for a defined period after arrival.

These should include, but are not limited to, management of the following:

- quarantine time periods and testing protocols (include sampling and treatments);
- chemical or pharmaceuticals (i.e. vaccines, antibiotics or hormones) waste;
- tanks (e.g. numbered);
- decontamination protocols including clothing, footwear and footbaths (entering and leaving areas);
- sample storage (e.g. access to freezer for keeping biological samples).

3.6. Prevention of escapes and incidental transfers

Stock escapes and incidental transfers from fish farms can be harmful to the environment through the potential for genetic predation, disease, and pest introduction or spread. An escape includes the unauthorised, deliberate or accidental release of any aquatic organism associated with the farming of fish (whether alive or dead) into fish farms or inland waters.

Provide biosecurity procedures detailing the prevention or subsequent management of escapees or incidental transfers, which include but are not limited to:

- checks and procedures for identifying non farmed fish on the fish farm;
- confirmation of non-contaminated fish transports;
- screening of waste water outlet pipes;
- flood mitigation measures and structures;
- maintaining anti-predator measures to prevent access by birds and animals; and
- checks and procedures for all production areas if an escape event is suspected.

3.7. Biosecurity Incident and Emergency Procedures

Provide procedures for all biosecurity incidents that may occur at the fish farm. These incidents must be reported in accordance with relevant legislation.

Disease incidents

Provide biosecurity incident and emergency procedures for a disease incident to prevent the spread of disease within and external to the fish farm (confirmed or suspected). These procedures should include but are not limited to:

- reporting to the Chief Veterinary Officer and the Director;
- identification of disease or suspected disease;
- transfer prevention within areas of the fish farm and outside of the fish farm (movement of water, staff and equipment);
- obtaining samples and disease diagnosis;
- management of diseased and non-diseased stock;
- destruction and disposal of diseased or deceased stock if required;
- investigation into disease outbreak;
- emergency contact details of staff and external authorities; and
- revision of operations and procedures to prevent similar incidents.

Escape and incidental transfer incidents

Provide biosecurity escape and incidental transfer incident reporting procedures to prevent the spread of disease or aquatic pests (confirmed or suspected). These procedures should include but are not limited to:

- reporting to the Director within 24 hours of becoming aware of the escape, suspected escape or incidental transfer;
- recapture and minimising the spread of escaped stock;
- investigation into escape; and
- revision of operating procedures to prevent similar future incidents

Emergency (e.g. extreme weather events)

Provide emergency procedures for extreme weather events (such as flooding), taking into consideration:

- the design of buildings at the site and their ability to withstand extreme weather events;
- identification of stock to be removed from the fish farm if such an event is forecast;
- emergency translocation approval for identified stock (identify and apply for approval in advance); and
- implementation of these procedures within a safe time period in accordance with warnings from relevant authorities.

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4. Auditing

4.1. Auditing Process

An audit process will be used to measure the implementation of the FFBMP. Partial internal audits may be conducted by company personnel on-site, while full audits covering all aspects must be carried out by independent external auditors.

Outline the audit practices that will be adopted for tracking the compliance requirements of the FFBMP.

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