

PREVENTING ESCAPES TO SUPPORT A HEALTHY AQUACULTURE INDUSTRY

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Best Management Practices, you can
help prevent fish escapes.*



BRITISH
COLUMBIA

Ministry of Agriculture,
Food and Fisheries

PREVENTING ESCAPES TO SUPPORT A HEALTHY AQUACULTURE INDUSTRY

Escapes are costly to everyone.

*This document summarizes key aspects of the Aquaculture Regulation under the provincial **Fisheries Act**. This document is not a legal authority and in no event will the Province be liable or responsible for damages of any kind arising out of the use of this summary. Persons who need to rely on the text of the regulation for legal and other purposes should obtain the official printed version.*

No one wants to lose fish – especially fish farmers. Losses from escapes can undermine your business and reduce public confidence in aquaculture.

To safeguard the industry and demonstrate its commitment to environmental protection, B.C. recently amended the provincial Aquaculture Regulation. New provisions are now in place to minimize the risk of escapes in all areas of fish farming.

YOU CAN HELP PREVENT ESCAPES. AS A FARM-SITE EMPLOYEE, YOU ARE REQUIRED TO:

Follow your company's Best Management Practices plans.

By following your company's BMP, you can help prevent fish escapes.

Every B.C. marine fish farm must have a set of Best Management Practices (BMP) plans. These plans are written by farmers and identify how a wide range of operational activities – from fuel storage to predator-attack prevention – will be conducted in ways that meet environmental objectives.

BMP plans also include written instructions for minimizing the risk of escapes during activities like harvesting, grading, towing, operating boats and changing nets.

All fish-farm employees are required to follow their company's BMP plans at all times.

All of these activities carry some risk, so it's mandatory that all employees understand, and follow, best management practices at all times. If you have any questions about your company's BMP plans, ask your farm manager.

Make sure you have the training you need.

Your company is required to train you in the proper application of its BMP plans. You must be trained in every area where you have responsibility.

If you don't think you have enough training in a given area, talk to your farm manager.

Operate boats with care.

In addition to following your company's best management practices for boating, you can help prevent escapes by:

- operating boats with care to avoid damaging net cages or anchoring systems

- docking boats only at designated docking sites, if they are not being used for operational activities like feeding or harvesting, and
- never mooring large boats to cage support system rails or stanchions.

For more information about safe boat operation, talk to your farm manager or see the boating section of your farm's BMP plans.

Make sure net cages are properly installed and maintained.

The Aquaculture Regulation sets clear standards for net cages and other fish containment structures. For example, farm-site employees must ensure that:

Problems with net maintenance were responsible for about 32 per cent of reported escapes from fish farms between 1997 and 2000.

- net cages without permanent mesh tops are always attached to the cage support system by the waterline rope
- weight or pressure is used to keep net-cage panels as taut as possible
- net cages are weighted in enough places to keep the tension even, and
- any tears found in nets are immediately repaired.

If you see something amiss, tell your supervisor or farm manager right away. If you're responsible for addressing the problem, you are required by law to do so as soon as possible.

For a full list of standards for net-cage installation and maintenance, see the Aquaculture Regulation.

Inspect nets and other containment structures regularly.

To help prevent escapes, the Aquaculture Regulation has requirements for four kinds of regular inspections:

1. Daily, visual inspections

These are required for all containment systems. Any problems – like damage to the cage support system or problems with the anchoring orientation – must be corrected as quickly as possible.

Farms are required by law to keep a log of these daily inspections on-site for one year after a given entry is made. Fisheries inspectors will review the log during site inspections, so it is essential that the records be accurate and up to date.

2. Periodic complete net inspections of each net cage or other containment structure

These must be carried out by a diver – or a comparable method, pre-approved by the provincial manager of aquaculture – after every event that increases the risk of net failure, including:

- storms
- extreme tides or currents
- changing and towing of net cages containing fish
- fish delivery

Regular inspections allow you to address problems before they lead to escapes.

- suspected vandalism
- recurring predator attacks, and
- any unusual events that may occur during harvesting, grading or other routine activities.

These complete inspections must be carried out at least once every 60 days. However, if you have just gone through a higher-risk activity or event such as the ones listed above, you must do a complete inspection of the net cage. After every complete net cage inspection, the clock resets for another 60 days.

3. Underwater net inspections

These are required before each new group of fish is introduced into a net cage, to make sure that the cage is properly deployed and has no holes.

4. Complete, out-of-water net-cage servicing and inspections

These should be done frequently – including a thorough visual inspection of the net, repair of all net damage and strength tests. These inspections are typically done at the end of each grow-out cycle, with records kept to prove the nets meet the strength standards set out in the Regulation.

Over 42 per cent of the escape incidents recorded between 1997 and 2000 were caused by people making mistakes during fish handling.

Fisheries inspectors concerned about net strength can order tests on the spot. They can also order that a net be removed from the water for servicing and inspection.

Approach fish-handling tasks with care.

The Aquaculture Regulation sets out basic rules to minimize the risk of escape during handling. For example:

- Any time you handle fish, you must use a spotter. The spotter’s job is to check for things that could damage net cages, ropes or cage-support systems – and to prevent that damage from happening.
- You must use catch nets during all fish-handling activities involving movement of fish outside or between their containment nets. Catch nets must be positioned to catch any fish that could escape, should you encounter a problem.

For more direction on minimizing risks of escape, read through the Aquaculture Regulation and check your company’s BMP plans. The plans include specific instructions for fish delivery, grading and harvesting.

Anyone can report an escape, any time of the day or night by calling (toll-free) 1-877-223-4673.

IF FISH ESCAPE

Every fish farm must have a written Escape Response Plan, posted in a place that’s visible to staff and supported by appropriate training. If you’re not familiar with your farm’s Escape Response Plan, talk to your farm manager.

All escapes – or suspected escapes – **must** be reported verbally to the provincial manager of aquaculture within 24 hours of their discovery. Failing to report an escape is a serious offence.

Failing to report an escape is a serious offence.

REPORTING ESCAPES

To report an escape, call (toll-free) 1-877-223-4673 – any time of the day or night.

Your farm must also submit a more detailed written report to the manager of aquaculture within one week of any escape. This report must include details of your farm's efforts to recapture escaped fish. In some cases, a recapture attempt may be required.

RECORD-KEEPING

Accurate, up-to-date, written records offer proof that your farm is meeting the standards set out in the Aquaculture Regulation.

Accurate, up-to-date records prove your farm is meeting provincial regulations and taking all reasonable precautions to prevent costly escapes.

All fish farms must maintain accurate records of:

- inventory
- inspection and maintenance activities, and
- drugs administered to fish.

This is mandatory and farm employees are responsible for ensuring that these records are kept.

For an overview of record-keeping requirements – including where records should be kept, and for how long – see the last three pages of this document.

IF YOU HAVE CONCERNS

If you believe that a fish farm's operating practices may not meet provincial standards – including the requirement to report all escapes – contact the manager of aquaculture. The information you provide will be considered confidential. (For contact information, please see page 5.)

CONCLUSION

The B.C. Aquaculture Regulation is designed to support a healthy, sustainable industry. Fish farms are inspected regularly to make sure they follow the Regulation and meet relevant provincial standards.

Farms that cannot prove they meet provincial standards can face penalties ranging from fines to charges under the provincial *Fisheries Act*. In the case of recurring escape incidents or consistently poor compliance, a farm may also lose its aquaculture licence.

Farm-level improvements have steadily reduced escapes as a percentage of production in recent years. Further reductions will support a healthy industry that the public can be confident in.

FOR MORE INFORMATION:

Visit the Ministry of Agriculture, Food and Fisheries' Web site at <http://www.agf.gov.bc.ca/fisheries/>

Call the provincial manager of aquaculture at (250) 897-7540.

Contact the Aquaculture Licensing and Compliance Branch at:
2500 Cliffe Avenue,
Courtenay, B.C. V9N 5M6
Telephone: 250-897-7540
Facsimile: 250-334-1410

Summary of Record-Keeping Requirements for Marine Commercial Finfish Aquaculture Facilities in British Columbia

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Type of Record	Specific Area	Contents of record	Retention Time	Location of record	Availability to an aquaculture inspector	Relevant section of regulation
FISH	Inventory	For each containment structure (net cage, bag type, etc.), licence holders must maintain accurate written records of: <ul style="list-style-type: none"> • the transport, transfer and introduction of fish into or away from the facility • the weekly fish mortalities, including the causes and the numbers attributable to each cause • all fish sales from the facility, including number and destination of fish sold • the source and number of each group/lot/stock of fish at the facility • each escape of fish from the facility 	Unspecified. Holders should maintain records for a reasonable period of time Records should be available at the facility until the lot of finfish is harvested or removed from the facility	At the facility until the lot of finfish is harvested or removed from the facility Unspecified after fish are harvested or removed from the facility	Within 48 hrs upon request; immediately upon request by an inspector who is at the facility	s. 5(1)- 5(2)
	Drugs	Licence holders must keep a record of the following information for a drug administered to the holder's fish: <ul style="list-style-type: none"> • aquaculture licence number, name of licence holder, location of facility • species of fish cultured/held • name of the veterinarian who prescribed any drugs • a log that: names any drugs, specifies how drugs were administered, specifies the treatment schedule including the date treatment commenced and ended, names and includes the signature of the person responsible for administering each treatment. 	Unspecified. Holders should maintain records for a reasonable period of time	Unspecified	Within 48 hrs upon request	s. 8(1)- 8(3)
	Harvests	Provide a statement to a fish processing plant or buying station to which fish are delivered from the facility, at the time of delivery. This statement must include the: <ul style="list-style-type: none"> • signature of the licence holder (or the licence holder's agent) and signature of the person responsible for administering the drug treatment discussed below. • aquaculture licence number 	1yr by holder and 1yr by plant/ station licensee	Unspecified	Within 48 hrs upon request	s. 8(4)- 8(7)

Summary of Record-Keeping Requirements for Marine Commercial Finfish Aquaculture Facilities in British Columbia

FISH	Harvests (continued)	<ul style="list-style-type: none"> • species of fish • date of harvest • name of processing plant or buying station the fish were delivered to • quantity of fish harvested • a lot number that identifies the shipment of fish • date and record of most recent drug treatment, if any, with a drug or date of the final day of the withdrawal period for an administered drug (whichever is latest). This should include the name of the drug, treatment schedule, the dates treatment commenced and finished, the prescribed withdrawal period, name of veterinarian (if any) who prescribed the drug, and the name and signature of the person responsible for administering the treatment 	1yr by holder and 1yr by plant/ station licensee	Unspecified	Within 48 hrs upon request	s. 8(4)- 8(7)
EQUIPMENT	Cage Support System	Record of daily visual inspections and repairs of the cage support system	1 year from date of daily visual inspection	At the facility	Within 48 hrs upon request; immediately upon request by an inspector who is at the facility	s. 6(1) Appendix 2, s.5(e)
EQUIPMENT	Net Cages: <i>regular maintenance</i>	<p>Licence holders must have a written maintenance record <i>for each net cage deployed</i> which includes:</p> <ul style="list-style-type: none"> • the inventory control number (see Appendix 2, section 20 for specifications on tagging each net cage) • dimensions and mesh size • record of most recent complete out-of-water servicing and inspection (see Appendix 2, section 18 for complete requirements for this servicing and inspection) <ul style="list-style-type: none"> ➢ when cage net mesh is tested as part of a complete out-of-water servicing and inspection, the person who carries out this servicing and inspection must complete and sign a net testing record (specific details of this requirement can be found in the “British Columbia Net Cage Mesh Strength Testing Procedure, Version 1”) • the accumulated time in water since most recent complete out-of-water servicing and inspection • a description and the dates of each inspection (by divers or other comparable method) since the most recent complete out-of-water servicing and inspection • a description, the dates and reasons for all repairs made since most recent complete out-of-water servicing and inspection 	6 months after the most recent complete out-of-water servicing and inspection	At the facility	Within 48 hrs upon request; immediately upon request by an inspector who is at the facility	s. 6(1) Appendix 2, s.18-21 “British Columbia Net Cage Mesh Strength Testing Procedure, Version 1”

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EQUIPMENT	Net Cages: <i>life history</i>	Licence holders must have a written record for each net cage that includes: <ul style="list-style-type: none"> the inventory control number (see Appendix 2, section 20 for specifications on tagging each net cage) manufacturer's name year produced dates and records of all complete out-of-water servicing and inspections since October 31, 2000 date of retirement (if applicable) 	1 year following retirement of net	Unspecified	Within 48 hrs upon request	s. 6(1) Appendix 2, s. 23-24
STAFF PRACTICES	Best Management Practices (BMP) Plans	Licence holders must maintain a copy of a BMP plan at the facility; this plan must include: <ul style="list-style-type: none"> a description of specific practices and procedures used to achieve the escape prevention objectives in Section 34(1) a statement that the plan has been reviewed and endorsed by the licence holder a statement that individuals responsible for implementation of the plan understand and have received training in the plan <p>Note: Other government policies and regulations may require submission of information in a BMP plan format; however the above requirements refer only to BMP plans prescribed under the <i>Aquaculture Regulation (78/02)</i></p>	Always	At the facility	Within 48 hrs upon request; immediately upon request by an inspector who is at the facility	Appendix 2, s. 34
	Escape Response Plans	Licence holders must have a written escape response plan; plans must be posted in visible locations at their aquaculture facilities; contents and locations of plans must be made known to all staff.	Always	At the facility	Within 48 hrs upon request; immediately upon request by an inspector who is at the facility	Appendix 2, s. 35

NOTE:

A licence holder must produce for inspection any record or Best Management Practices plan required to be kept under this regulation within 48 hours of a request by a provincial aquaculture inspector. Records that are required under this regulation to be kept at the facility must be provided immediately upon request by an inspector who is at the facility. An inspector may enter the facility any time during normal business hours (see section 12(3) of the *Aquaculture Regulation* for details).