

ShellMAP - Management Plan Guidelines

These Management Plan Guidelines revoke and replace all previous Management Plan Guidelines and remain in force until revoked.

Completed by	ShellMAP
Issued	26/03/2026

This document outlines ShellMAP's typical Shellfish Harvest Area Management practices to ensure regulated shellfish are safe for consumption and meet market access requirements. These guidelines are indicative only, and ShellMAP may implement alternative management measures where necessary to mitigate food safety risks within a harvest area.



1 Contents

2	HARVEST AREA OPERATION	2
3	CONDITIONAL ENVIRONMENTAL MANAGEMENT	3
4	BIOTOXIN MANAGEMENT	6
5	MICROBIAL SAMPLE MANAGEMENT	8
6	SEWAGE SPILL MANAGEMENT	10
7	EXTENDED CLOSURE MANAGEMENT	11
8	VIBRIO MANAGEMENT	12
9	SHELLFISH RECALL	12
10	SHELLFISH RELAY	12
11	HARVEST AREA SAMPLING	13
12	SHELLMAP CONTACT DETAILS	14
13	APPENDIX	15
13.1	Appendix – Grower Submission Template - Re-opening Salinity	15
13.2	Appendix – ShellMAP Management Flowcharts	16

2 Harvest Area Operation

The Shellfish Market Access Program (ShellMAP) monitors the food safety risk of commercial Tasmanian shellfish in accordance with the Australian Shellfish Quality Assurance Program (ASQAP) guidelines. ShellMAP regulates the harvesting of shellfish from defined harvest areas to ensure shellfish is safe to eat and the public health risk is adequately managed.

ShellMAP will communicate regulatory decisions to growers and issue regulatory classification notices.

Shellfish harvest area classification notices are published online and are available via <https://nre.tas.gov.au/aquaculture/shellmap> .

Shellfish harvest area boundaries are maintained within and published on LISTMap. These can be accessed via <https://www.thelist.tas.gov.au/app/content/home/> .

It is the responsibility of each grower to ensure that the management criteria have been met, and the harvest area is open prior to commencing harvest.

Growers are encouraged to consult with ShellMAP when food safety risk is elevated, or if they would like to know more about what can be done to reduce or manage risk in their area.



3 Conditional Environmental Management

Harvest areas with a **Conditional Classification** can be in either “open” or “closed” status, based on environmental parameters which indicate predictable pollution events.

Conditionally Approved and **Conditionally Restricted** harvest areas must meet the relevant ASQAP classification requirements when in the “open” status. This Management Plan issued by ShellMAP states the harvest area environmental criteria for “open” status, which allow shellfish to be harvested for safe consumption.

Conditionally Approved and **Conditionally Restricted** harvest areas can be managed based on either combined environmental criteria or a salinity-only criterion, if a ShellPOINT salinity sensor is installed and deemed suitable for management by ShellMAP. For harvest areas with dual management systems, ShellMAP can notify growers of the management system currently utilised for the harvest area (i.e Salinity-Only or Combined Environmental).

Growers with a ShellPOINT salinity sensor installed in their harvest area are eligible to be managed utilising a Salinity-Only management criterion. When utilising a Salinity-Only criterion the harvest area will have opted in to being managed under two separate management systems (Salinity-Only and Combined Environmental). A salinity sensor may be considered unsuitable for management due to the following reasons:

- The sensor has exceeded its manufacturer’s service period,
- The sensor shows abrupt or unusual salinity values indicative of malfunction, or
- The sensor is no longer consistently providing data.

If the salinity sensor is not suitable for management, or a harvest area is unable to be managed using the salinity sensor for other reasons, the combined environmental management criteria will be used to manage the food safety risk.

3.1.1 Combined Environmental Management Criteria

Criteria will be based on environmental measurements from approved environmental stations that representatively indicate water quality in the harvest area. This can include approved riverflow and rainfall stations.

Combined environmental management criteria will be provided in specific growing area management plans.

3.1.2 Environmental Management Criteria (Salinity-Only)

Criteria will be based on environmental measurements from approved environmental stations that representatively indicate water quality in the harvest area. This can include approved ShellPOINT Salinity Stations.

Salinity-Only environmental management criteria will be provided in specific growing area management plans.



3.1.3 Closure Procedure - Environmental Management Criteria (Combined & Salinity-Only)

Temporary harvest area closures may occur due to an exceedance of environmental management criteria, Combined or Salinity-Only.

ShellMAP will communicate a harvest area closure to growers, industry and regulators through appropriate communication channels and regulatory Classification Notices.

Combined environmental criteria harvest area closures will occur based on environmental data from approved stations (rainfall and riverflow). For combined criteria, daily rainfall totals are measured in 24 hour periods from 0900 hrs and riverflow is measured instantaneously in 15 minute increments. Rainfall closures occur from 1000 hrs following exceedance of the rainfall criterion and riverflow closures occur from the first exceedance of the riverflow criterion.

Salinity-only harvest area closures will occur based on salinity data from the ShellPOINT sensor network.

Salinity-only closures will be determined by ShellMAP based on the following criteria:

- **At least four consecutive salinity readings below the salinity-only management criteria, and**
- **Evidence of a consistent downward trend in salinity levels within the harvest area, and**
- **Occurrence of an associated adverse pollution event.**

The harvest area will be closed from the time of the first salinity value below the salinity-only management criterion.

3.1.4 Reopening Procedure – Environmental Criteria Combined

To open a harvest area following a combined environmental closure:

- all environmental criteria outlined in Table 1 must be satisfied; and
- rainfall has either ceased or daily rainfall is less than 10 % of 7-day rainfall criterion (rainfall closures only), and
- 48 hours of satisfactory salinity above the salinity criterion must be demonstrated

To demonstrate satisfactory salinity, there must be either 48 hours of satisfactory ShellPOINT salinity data or shellfish growers are required to manually collect three satisfactory salinity measurements.

The three manual salinity measurements (T_0 , T_1 , T_2) must be collected within the harvest area at low tide, over 48 hours. The salinity measurements must be taken from

Page 4 of 18

ShellMAP - Management Plan Guidelines

Issued: 26/03/2026



representative locations in the lease area and must meet salinity criteria outlined in Table 1. All other environmental criteria outlined in Table 1 must also be satisfied in the 48-hour period. A template for submission is given in Appendix – Grower Submission Template - Re-opening Salinity.

Shellfish growers should notify ShellMAP of their intentions to open and submit their salinity measurements to shellmap@nre.tas.gov.au.

3.1.5 Reopening Procedure - Salinity-Only

To open a harvest area following a salinity-only environmental closure:

- 48-hours of satisfactory salinity must be demonstrated on the ShellPOINT sensor, and
- There is evidence that the adverse pollution event is no longer significantly impacting the harvest area

T0 for re-opening using ShellPOINT sensors is calculated from the first value above the salinity-only management criteria. If the sensor observes **at least four consecutive values below the salinity only management criteria** within the 48-hour period, the exceedance will trigger a new “closure” event requiring a new T0 to be calculated from the first salinity value above the salinity-only management criteria.

Shellfish growers should notify ShellMAP of their intentions to open following a salinity-only harvest area closure.

3.1.6 Alternate Reopening Procedure - Shellfish Meats

Harvest areas may be opened if shellfish growers can demonstrate safe levels of *E. coli* in shellfish meats. If you would like to open a harvest area using shellfish meat samples, please contact ShellMAP to arrange a sampling plan.

To re-open utilising shellfish meats, 5 lots of 1 dozen shellfish must be submitted for analysis at the Public Health Laboratory and *E. coli* results must be less than 2.3 CFU/g, however it is acceptable to have one sample between 2.3 - 7 CFU/g.

3.1.7 Reopening Procedure – Export Approved Harvest Areas

To open an Export Approved harvest area the following conditions must be met in addition to 3.1.4 or 3.1.5:

- 5 lots of 1 dozen shellfish must be submitted for analysis at the Public Health Laboratory and *E. coli* results must be less than 2.3 CFU/g, however it is acceptable to have one sample between 2.3 - 7 CFU/g.



4 Biotoxin Management

The testing of shellfish meats for biotoxins, and monitoring of water for potentially toxic phytoplankton, is undertaken to control biotoxin risk in Tasmania. An updated biotoxin sampling schedule is distributed to growers each year. The frequency of testing is dependent on the growing area's biotoxin risk rating and is subject to change depending on recent biotoxin results in the area.

Biotoxin and phytoplankton samples will be analysed in accordance with the Biotoxin Management Plan which can be found online ([ShellMAP Biotoxin Management Plan](#)). Biotoxin shellfish meat samples must be taken from representative locations within a harvest area and can manage the biotoxin risk for an entire growing area. The regulatory limits for biotoxin and phytoplankton samples can be found in Table 1 and Table 2. ShellMAP may request additional samples following any unusual results.

Table 1. Regulated biotoxin groups and associated limits.

	Toxin Group	Regulatory limit
PST	Paralytic Shellfish Toxin (Saxitoxin dihydrochloride equivalent)	0.8 mg/kg
AST	Amnesic Shellfish Toxin (Domoic Acid equivalent)	20 mg/kg
DST	Diarrhetic Shellfish Toxin (Okadaic Acid equivalent)	0.16 mg/kg
NST	Neurotoxic Shellfish Toxin	200 MU/kg

In addition to the regulated biotoxins, other toxin groups which pose a food safety risk are monitored by ShellMAP. This includes Tetrodotoxins (TTXs) which are a group of potent neurotoxins with a similar action and potency to PSTs and with a similar acute toxicity to saxitoxin.

Although TTX is found in bivalves it is not regulated due to uncertainty around the sources and mechanism of TTX in bivalve molluscs. The European Food Safety Authority has proposed a TTX safety limit of 0.044mg/kg. New Zealand has demonstrated that shellfish containing PST below regulatory limits could be found to be above saxitoxin equivalents when TTX is included.

Analytical Services Tasmania will report TTX separately. TTX is considered a cumulative total for saxitoxin with an equivalence of one e.g. if PST result is 0.5 mg/kg and TTX is 0.3 mg/kg then an area can be closed based on a saxitoxin equivalent of 0.8 mg/kg. In this way TTX levels may be used to regulate closure for PST toxins. To date the levels of TTX reported in bivalve molluscs are generally low, however growers need to be aware that TTX may be regulated in the future.



Table 2. Toxin producing phytoplankton species and associated alert levels.

Phytoplankton species	Toxin Type	Grower Alert Level (Cells/L)	Closure Alert Level (Cells/L)
Alexandrium catenella ¹	PST	200	500
Alexandrium minutum ¹	PST	200	500
Alexandrium tamarense ¹	PST	200	500
Alexandrium ostenfeldii ¹	PST	200	500
Gymnodinium catenatum	PST	1000 (Mussels) or 2000 (Shellfish other)	5000
Dinophysis acuminata	DST	1000	-
Dinophysis acuta	DST	1000	-
Dinophysis caudata	DST	1000	-
Dinophysis fortii	DST	1000	-
Prorocentrum lima	DST	500	-
Pseudo-nitzschia seriata group ²	AST	50,000	500,000
Pseudo-nitzschia delicatissima group ²	AST	500,000	
Karenia brevis	NST	1000	5000
Karenia/Karlodinium/Gymnodinium group ³	NST	250,000	300,000

Growers will be advised when counts of toxic phytoplankton species are elevated and all phytoplankton results will be communicated through weekly news bulletins.

Growers will be advised of biotoxin sample results through AST messages and weekly ShellMAP news bulletins.

4.1.1 Biotoxin Closure

If phytoplankton are detected in the water exceeding the closure alert limits in Table 2, ShellMAP will close the relevant harvest areas, pending a passing biotoxin result.

If biotoxins are detected in shellfish exceeding the regulatory limits in Table 1, ShellMAP will close the growing area. In some cases, closures may be backdated to the last passing sample.

If a biotoxin result exceeds the regulatory limit, preparations should be made in case a withdrawal or recall is required. In the event of a withdrawal or recall growers will be contacted by the Primary Produce Safety Program. For further information please refer to section 10 - Shellfish Recall

4.1.2 Reopening Procedure - Biotoxin Closure

Following a biotoxin closure, two successive passing shellfish (biotoxin) samples must be collected to demonstrate the shellfish are safe for consumption.



The biotoxin samples must be taken from representative locations in the harvest area.

The second passing sample must be collected at least 7 days after the first passing sample.

The passing samples must be collected at least 7 days apart to allow enough time for the algal bloom to subside and to demonstrate that biotoxins in the shellfish are consistently below the regulatory limits.

4.1.3 Relaying when regulatory biotoxin sampling is not being undertaken

If regulatory biotoxin sampling is not being undertaken in the relevant harvest area (the minimum holding period will be extended to 60 days).

If you have any technical questions regarding biotoxin testing or are not receiving your biotoxin results from Analytical Services Tasmania (AST) please contact AST on the following:

AST:

Ph: 03 6165 3300

E-mail: enquiries@ast.tas.gov.au

5 Microbial Sample Management

ShellMAP requires microbial samples to be submitted as a part of regular management of shellfish harvest areas. This can include shellfish water (TTC) samples and shellfish meat (*E. coli*) samples.

5.1.1 Shellfish waters (thermotolerant coliforms)

Shellfish water results from investigative and Adverse Pollution Condition (APC) sampling are monitored by ShellMAP and will be used to change the status of a harvest area if required.

The ASQAP requirements for Conditionally Approved passing shellfish water samples are:

- No more than 10% of water samples exceed 21 CFU/100ml
- Median must not exceed 14 CFU/100ml

The ASQAP requirements for Restricted passing shellfish water samples are:

- No more than 10% of water samples to exceed 85 CFU/100ml.
- Median must not exceed 70 CFU/100ml.

Note: The Public Health Laboratory does not count beyond 100 colonies on a plate. These results are reported as >100 CFU/100 mL and are considered high level failures indicating polluted water.



5.1.2 Shellfish waters Closures

If shellfish water samples taken as part of routine APC water sampling show elevated levels of thermotolerant coliforms a closure will generally be enacted, pending further results. The criteria can be found below.

The ASQAP requirements for **Conditionally Approved Classification** for all harvest areas are as follows:

- no more than 10% of [microbiological] shellfish water samples exceed 21 CFU/100ml.
- shellfish waters median must not exceed 14 CFU /100ml.

The ASQAP requirements for **Restricted Classification** for all harvest areas are as follows:

- no more than 10% of [microbiological] shellfish water samples to exceed 85 CFU/100ml.
- shellfish waters median must not exceed 70 CFU/100ml.

When determining a closure decision, ShellMAP will check individual sampling site results and may request additional information (including salinities) from growers. Primary Produce Safety Program will also assess the information.

ShellMAP will communicate any harvest area closures to growers through relevant communication channels.

5.1.3 Re-opening after failed thermotolerant coliform results

If investigative or APC sampling result in closure, ShellMAP will discuss the re-opening process with growers. The re-opening requirements will vary based on individual closure circumstances such as harvest area export status and will be communicated to growers by ShellMAP. The typical re-opening process includes the following:

- Relevant environmental management criteria are met for 48 hours following failing shellfish water sample time.

or

- 5 lots of 1 dozen passing shellfish meat (*E. coli*) samples, and
- Relevant environmental management criteria are met

5.1.4 Shellfish meats (*E. coli*)

ShellMAP may request meat samples for ShellMAP investigations, sewage spill re-openings and if there are ongoing pollution concerns in a growing area.

The FSANZ requirements for **direct harvest** of shellfish are as follows:

FSANZ Schedule 27- Requires all Approved harvest area samples to be below 2.3 CFU/g, however one sample can be between 2.3 CFU/g and 7 CFU/g.



Note: Any shellfish sample above the regulatory limit must be reported to the Primary Produce Safety Program as standard protocol.

Growers should clearly label any meat samples that you may be testing for your own purposes (e.g. trials) so that there is no confusion caused by mandatory reporting.

The ASQAP requirements for **Approved Classification** for harvest areas are as follows:

- no more than 10% of [microbiological] shellfish meat samples to exceed 7 *E. coli* CFU/g.
- shellfish meat median must not exceed 2.3 *E. coli* CFU/g.

The ASQAP requirements for **Restricted Classification** for all harvest areas are as follows:

- no more than 10% of [microbiological] shellfish meat samples to exceed 141 *E. coli* CFU/g.
- shellfish meat median must not exceed 46 *E. coli* CFU/g.

Sampling Requirements

- 5 lots of 1 dozen unshucked shellfish must be submitted to the Public Health Laboratory.

Five lots of 1 dozen shellfish is the FSANZ standard and ShellMAP requirement for shellfish meat sampling. Any alternate sampling arrangements should be discussed with ShellMAP.

6 Sewage Spill Management

6.1.1 Sewage spill closures

TasWater will contact growers and ShellMAP when a spill to the environment has occurred, or is about to occur, near a shellfish zone.

If growers have received an alert from TasWater advising of a sewage spill that may impact a harvest area, it is advisable that harvest be suspended pending further advice from ShellMAP.

ShellMAP assesses each spill after communicating with TasWater regarding the spill volume, duration and type of effluent involved (treated or untreated). ShellMAP will action a closure if necessary, or a precautionary closure if more time is needed to assess the risk to the harvest area. ShellMAP will communicate a harvest area closure to growers, industry and regulators through appropriate communication channels and regulatory classification notices.

If a closure is not deemed necessary by ShellMAP following investigation, ShellMAP will notify growers, to advise that a closure will not be actioned.



6.1.2 Re-opening after sewage spill

Viruses such as Norovirus can persist in the tissues of bivalves long after bacterial indicators of pollution are detectable. For this reason, harvest areas must remain closed for an extended period (typically 21 days) following the cessation of a sewage spill determined to impact the harvest area. Growers have two options (*E.coli* only or *E.coli* & Phage testing) to re-open a harvest area following a sewage spill. Growers should contact ShellMAP to discuss reopening procedures and ensure the required sampling conditions are met:

E.coli Only Testing

- Shellfish sample collection at least 14 days after spill cessation
 - 5 lots of 1 dozen unshucked shellfish
- Passing shellfish meat *E. coli* test result
- A period of 21 days since spill cessation
- Passing Environmental Criteria

E.coli & Phage Testing

- Shellfish sample collection at least 7 days after spill cessation (Phage and *E.coli*)
 - 5 lots of 1 dozen unshucked shellfish for Phage testing
 - 5 lots of 1 dozen unshucked shellfish for *E.coli* testing
- Passing *E. coli* test result
- Passing Phage test result
- Passing Environmental Criteria

The cost of testing shellfish meat samples (excluding Phage testing) following a sewage spill will be paid by ShellMAP.

7 Extended Closure Management

Growers may voluntarily enter periods of extended closure due to operational requirements or environmental circumstances. An extended closure is generally considered to be approximately 6 months or longer. A voluntary closure period must be unanimous for all growers in the area. In addition, growers should be aware that a voluntary closure includes the suspension of relay (out) activities as well as direct harvest.

Growers should notify ShellMAP if intending to enter a voluntary extended closure to discuss sampling requirements.

7.1.1 Extended Closure Procedure

Growers to notify ShellMAP of intention to remain “closed” or to “close” the harvest area for an extended period.



7.1.2 Extended Closure Reopening Procedure

Please contact ShellMAP to discuss the re-opening requirements after a prolonged closure, as specific re-opening requirements may vary depending on the potential risk levels in the growing area. ShellMAP may require the following:

- Environmental management criteria must be within acceptable limits.
- 48 hours of satisfactory salinity must be demonstrated
- Two successive passing biotoxin samples must be submitted 7 days apart. If all results (PST, DST, AST) from the initial sample are below the limit of detection a second sample may not be required.
- One phytoplankton sample must be submitted, with results below regulatory limits.
- ShellMAP may also request a shellfish meat sample to be submitted to the Public Health Laboratory for *E. coli* testing. The cost will be covered by ShellMAP.

8 Vibrio Management

Any re-opening following a detection of *Vibrio spp.* in shellfish must occur in consultation with the Primary Produce Safety Program. The food safety program team will be able to provide further information and instruction on the closure and re-opening process as it relates to Vibrio.

Food Safety Program

Ph: 03 6165 3777

E-mail: foodsafety.enquiries@nre.tas.gov.au

9 Shellfish Recall

Food withdrawals and recalls are the responsibility of the Primary Produce Safety Program. The food safety program team will be able to provide further information and instruction on the withdrawal and recall process.

The contact details for the food safety program can be found below.

Ph: 03 6165 3777

E-mail: foodsafety.enquiries@nre.tas.gov.au

10 Shellfish Relay

Shellfish may be moved between harvest areas throughout the state with a relay authorisation issued by ShellMAP. Shellfish and associated marine farming equipment must be moved in accordance with the conditions of the relay authorisation and POM's permit issued by the Chief Veterinary Officer.



Where relay authorisations are in place, the closure type of the harvest area may impact on minimum holding periods, particularly if the closure is due to sewage or biotoxins.

It is the responsibility of the relay authorisation holder to inform the receiving business of any relevant minimum holding periods.

Relaying From	Authorisation Required From ShellMAP	Minimum Holding Period Post Relay
Unclassified Areas (Under Certain Conditions)	Yes	60 days*
Restricted or Conditionally Restricted Areas	Yes	14 days
Restricted or Conditionally Restricted Areas that have exceeded thermotolerant coliform water results	Yes	21 days**
Conditionally Restricted Areas that have exceeded environmental criteria	Yes	21 days**
Conditionally Approved or Approved Areas in Closed Status	Yes	14 days***
Any Permitted Harvest Area Closed Due to Sewage Contamination	Yes	21 days
Any Permitted Harvest Area Closed Due to Biotoxins	Yes	60 days****

*Additional testing may be required at the cost of the business and all necessary wild fisheries/marine farming authorisations must be obtained.

**Relay times for Restricted or Conditionally Restricted Areas that have exceeded thermotolerant coliform water results, or Conditionally Restricted Areas that have exceeded environmental criteria, may resume to 14 days following 48 hours of acceptable salinity at low tide. Stock relayed before the 48-hour period is subject to the 21-day extended relay condition.

*** If regulatory sampling is not being undertaken in the relevant harvest area (i.e biotoxin sampling) the minimum holding period may be extended (i.e for biotoxins 60 days).

**** Biotoxin relay times may be reduced to 14 days following two biotoxin results from samples of relayed stock collected at least 7 days apart to be within limits set out in the Food Standards Code. If biotoxin samples from relayed stock are not submitted, a minimum 60 day holding period is required.

11 Harvest Area Sampling

Growers are responsible for meeting the requirements of the ShellMAP sampling schedule for their harvest area. The collection of samples must continue during periods of closure unless discussed with and approved by ShellMAP. Please refer to Section 8 - Extended Closure Management, for information on entering a voluntary closure.

Non-compliance with the sampling schedule may result in harvest area closure.



If you are the designated sampler for a given growing area and you are unable to collect the samples as per the sampling schedule (e.g. holidays), it is your responsibility to arrange an alternate person to collect and submit the relevant sample.

Please advise ShellMAP of any changes in sampling arrangements.

12 ShellMAP Contact Details

Contact Number: (03) 6165 3771

Email: shellmap@nre.tas.gov.au

Postal Address: GPO Box 44, Hobart Tasmania 7001

Office Address: Lands Building, Level 3, 134 Macquarie St, Hobart 7000



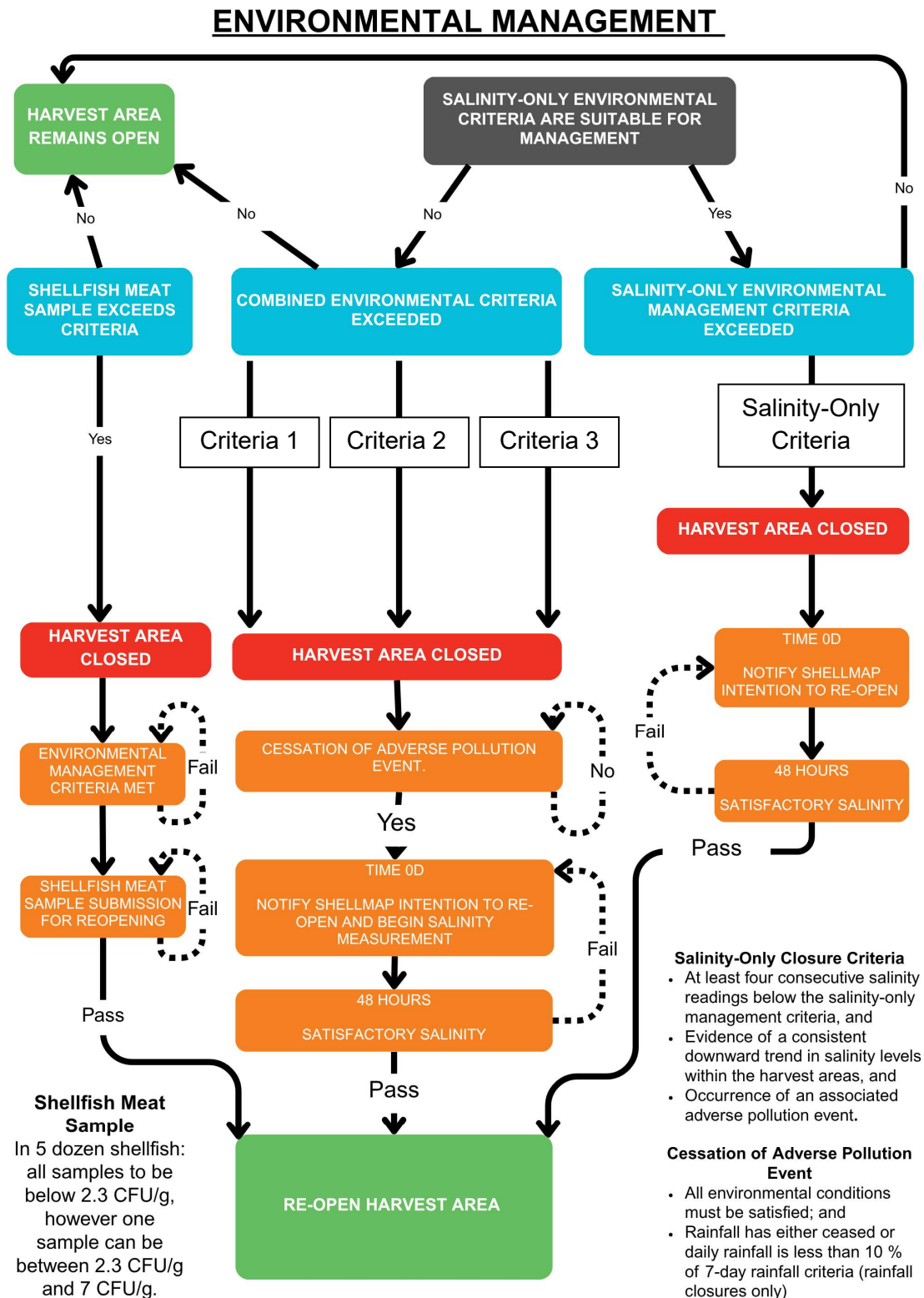
13 Appendix

13.1 Appendix – Grower Submission Template - Re-opening Salinity

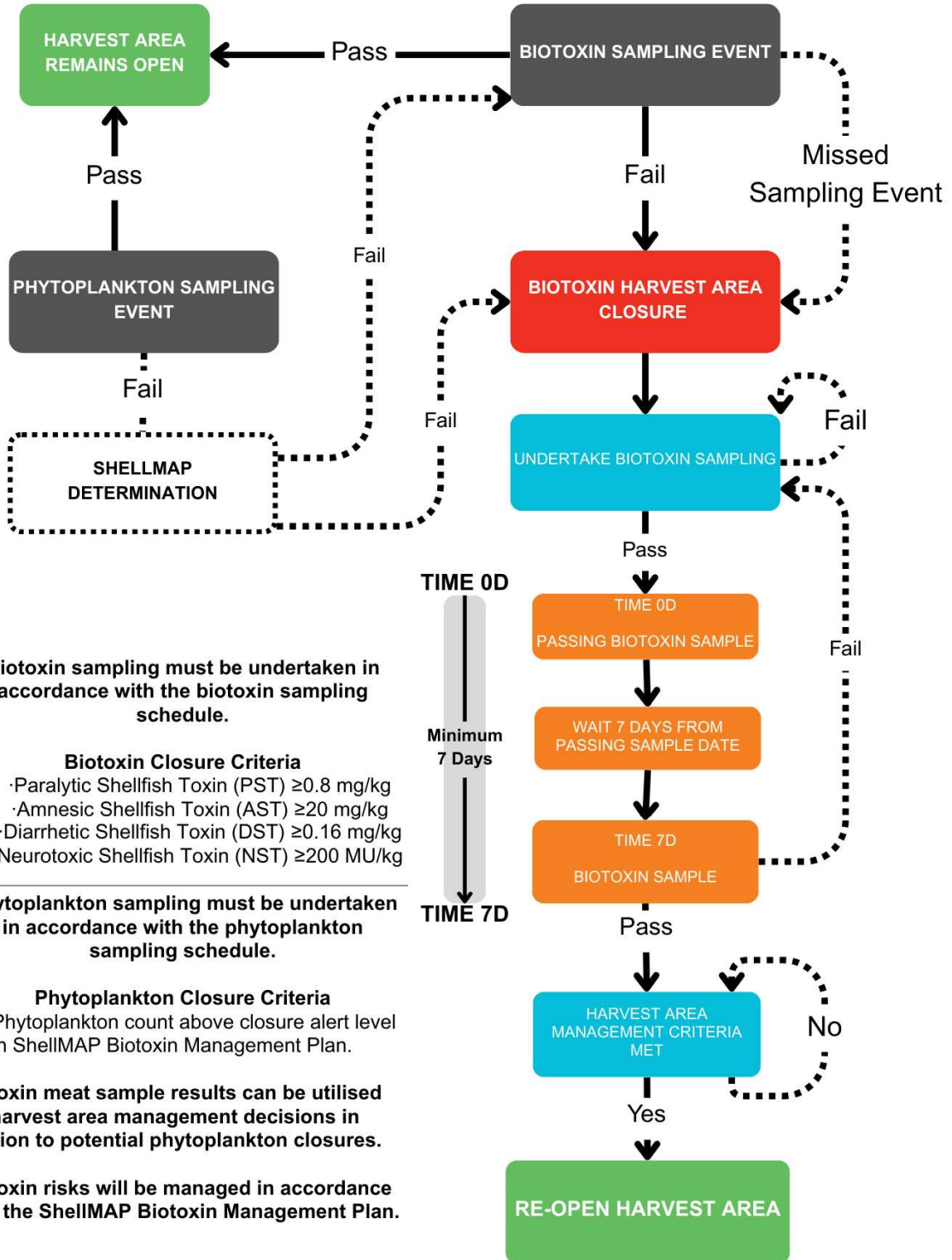
#	Sampling officer	Time taken	Date taken	Source (Growing area, harvest area, lease number)	Tide	Salinity (‰)
<i>Example</i>	<i>e.g. John Smith</i>	<i>09:55</i>	<i>01/06/2026</i>	<i>Big Bay, Zone B, Lease 10</i>	<i>Low</i>	<i>30.0</i>
1 (T_{0hrs})						
2 (T_{24hrs})						
3 (T_{48hrs})						



13.2 Appendix – ShellMAP Management Flowcharts



BIOTOXIN MANAGEMENT



Biotoxin sampling must be undertaken in accordance with the biotoxin sampling schedule.

Biotoxin Closure Criteria

- Paralytic Shellfish Toxin (PST) ≥ 0.8 mg/kg
- Amnesic Shellfish Toxin (AST) ≥ 20 mg/kg
- Diarrhetic Shellfish Toxin (DST) ≥ 0.16 mg/kg
- Neurotoxic Shellfish Toxin (NST) ≥ 200 MU/kg

Phytoplankton sampling must be undertaken in accordance with the phytoplankton sampling schedule.

Phytoplankton Closure Criteria

- Phytoplankton count above closure alert level in ShellMAP Biotoxin Management Plan.

Biotoxin meat sample results can be utilised for harvest area management decisions in relation to potential phytoplankton closures.

Biotoxin risks will be managed in accordance with the ShellMAP Biotoxin Management Plan.



Reopening following a Sewage Closure

