

Aquatic Health - Abalone Viral Ganglioneuritis (AVG) Response Plan

Version 3.0 – December 2025

PIRSA Emergency Phone 1800 255 556

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Review Date: December 2028	Cancels version: V2 – October 2013
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Document Control Page:

Authority:		State Controller (PIRSA) pursuant to Part 2 of the State Emergency Management Plan			
Issuing Agency:		Department of Primary Industries and Regions (PIRSA)			
Revision History:					
Version	Revision Description	Date	Version	Revision Description	Date
1.0	Effective from this date	03/04/2009			
2.0	Complete update	03/10/2013			
3.0	Complete update	09/12//2025			
Distribution:		Electronic distribution to internal PIRSA staff			
Classifications:					
Confidentiality	For Official Use Only	Information must only be shared on a need-to-know basis.			
Integrity	[I2] Integrity 2	MODERATE requirement meaning that the Agency would be somewhat affected by a loss of integrity however the situation could be easily detected and recovered.			
Availability	[A1] Availability 1	LOW requirement meaning that loss of the data would have only a minor impact on the business for an extended period (i.e. best-effort recovery).			
State Records Requirements:		Permanent Retention.			
Approvals:					
	Name	Title	Date		
Technical	Skye Fruean	Chief Veterinary Officer	08/12/2025		
Final sign off	Mehdi Doroudi	State Controller (PIRSA)	09/12/2025		
Amendments:		Please provide any comments or suggestions to the Manager, Aquatic Animal Health			

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PURPOSE

1. The Aquatic Animal Health – Abalone Viral Ganglioneuritis (AVG) Response Plan provides the operational and technical framework for the Department of Primary Industries and Regions (PIRSA) staff and industry to respond to and recover from a confirmed detection of haliotid herpesvirus (HaHV-1), the virus that causes AVG.
2. The plan will be activated by the State Controller (PIRSA) in the event HaHV-1 is detected outside of the Southern Zone Abalone Fishery (SZAF).
3. This plan can also be used as a template for other known or unknown emergency abalone disease incursions.

RESPONSE PLAN REVIEW

4. The State Controller (PIRSA) is responsible for the preparation and review of the PIRSA emergency management documents. The Emergency Management Team (EMT) coordinates the review, maintenance and distribution of these documents.
5. The Aquatic Animal Health (AAH) Program is responsible for providing technical review of the content within the response plan, through consultation with other relevant technical groups.

BACKGROUND

6. AVG is caused by haliotid herpesvirus (HaHV-1) also referred to as abalone herpesvirus (AbHV).
7. Abalone herpesvirus (Haliotid herpesvirus-1) is declared a notifiable disease pursuant to section 4 of the [Livestock Act 1997](#).
8. Greenlip Abalone (*Haliotis laevis*), Blacklip Abalone (*Haliotis rubra*) and hybrids of these two species are susceptible to HaHV-1. There is no evidence that AVG has any effect on human health.
9. In this document, and for simplicity, the virus and disease will be referred to as 'AVG'.
10. In South Australia, AVG was detected in wild abalone at Port MacDonnell during February 2024. Since this initial detection, the virus spread north-west and was subsequently detected at Douglas Bay (May 2024), Southend (May and June 2024), Number 1 Rocks and Admella reef (December 2024), and Ringwood Reef, Beachport and Gerloff Bay (December 2024).
11. An outbreak of AVG in the Central Zone Abalone Fishery (CZAF), Western Zone Abalone Fishery (WZAF) or aquaculture licenced sites in South Australia has the potential to significantly impact the abalone fishery and abalone aquaculture industry.

12. This plan should be considered as a working document, which is refined and amended when further information becomes available.
13. A response, led by a PIRSA Incident Management Team (IMT), will be initiated when the presence of HaHV-1 is confirmed outside of the SZAF. This includes in wild abalone from the CZAF or WZAF, land-based abalone aquaculture facilities, and fish processors.

CLINICAL SIGNS

14. Clinical signs of AVG are described in the [WOAH manual for infection with Abalone Herpesvirus](#). Abalone may demonstrate one or more of the following signs:
 - i. irregular peripheral concave elevation of the foot
 - ii. swollen and protruding mouth parts
 - iii. eversion of the radula
 - iv. minimal movement of the pedal muscle
 - v. excessive mucus production
 - vi. absence of the marked extension of the foot shown in the righting reflex when healthy abalone are turned onto their backs
 - vii. reduced pedal adhesion to the substrate.
 - viii. In fish processors, abalone may also exhibit 'hard foot' or tetany, abnormal spawning and 'bloating' (Ellard et al., 2009).

DIAGNOSTIC CRITERIA

15. Diagnostic criteria is in accordance with the [WOAH manual for infection with Abalone Herpesvirus](#).
16. The presence of HaHV-1 shall be suspected if at least one of the following criteria is met:
 - i. Presence of high mortality rates (up to 90%) associated with [clinical signs](#) of AVG.
 - ii. Histopathology (ganglioneuritis) observed in neural tissue sections of a single abalone sample.
 - iii. Positive result by qPCR or conventional PCR on at least one abalone sample.
17. The presence of HaHV-1 is considered to be confirmed if, in addition to the criteria in 14, one or more of the following criteria are met:
 - i. Positive result by qPCR on one or more abalone where positive histopathology and/or high mortality with [clinical signs](#) consistent with AVG also occurs.
 - ii. Positive result by in-situ hybridisation on neural tissue section.
 - iii. Positive result by conventional PCR on neural tissue section followed

by sequence analysis of the amplicon to confirm HaHV-1 nucleic acid sequence.

LEGAL AND ADMINISTRATIVE FRAMEWORK

18. This plan is prepared in accordance with the Commonwealth AQUAVETPLAN [Disease Strategy Manual – Abalone Viral Ganglioneuritis](#).
19. AQUAVETPLAN is a series of manuals that outline Australia's approach to national disease preparedness and propose the technical response and control strategies to be activated in a national aquatic animal disease emergency. The manuals also provide guidance based on sound analysis, linking policy, strategies, implementation, coordination and emergency management plans.
20. Powers to implement this plan are included in the [Aquaculture Act 2001](#), [Livestock Act 1997](#) and [Fisheries Management Act 2007](#). More detailed information about the legal powers under these Acts can be found in [Section 1](#).

RESPONSIBILITIES

21. Under the [State Emergency Management Plan](#) (SEMP), PIRSA is the Control Agency for emergency animal (including aquatic animal) disease.
 - Control is defined as the overall direction of emergency management activities in an emergency situation. The authority for the control role is established under the *Emergency Management Act 2004* and the SEMP and carries with it the responsibility for tasking and coordinating other organisations in accordance with the needs of the situation. It does not include command of other agencies' staff.
22. As the Control Agency, PIRSA is responsible for ensuring it is adequately prepared to respond to an emergency event. This includes monitoring for potential emergency events and, where appropriate, taking actions to prevent an emergency event occurring and responding to events of lesser significance in order to prevent escalation to an emergency level. When responding to an emergency the Control Agency must ensure that the following responsibilities are, as far as is practicable, accounted for:
 - Taking control of the response to the emergency (including the appointment of an Incident Controller and incident management structure)
 - Ensuring a safe working environment and safe systems of work
 - Ensuring effective stakeholder engagement, communication and cooperation with all involved
 - Continually assessing the situation and identifying, assessing and managing current and potential risks and consequences, and sharing information with all involved

- Developing and sharing plans and strategies in line with the Principles of the Act and the SEMP that meet the requirements of all agencies responding to the emergency (an incident action plan)
 - Implementing and monitoring the incident action plan
 - Ensuring the effective allocation and use of available resources
 - Ensuring the public is adequately informed and warned to enhance community safety
 - Facilitating the investigation of the emergency and review of response activities
 - Ensuring transition from response to recovery, including the coordinated handover to the state recovery arrangements where necessary.
23. PIRSA is responsible for implementing this disease response plan and working with other agencies and departments (both State and national), including the national Aquatic Consultative Committee for Emergency Animal Disease (AqCCEAD).

SECTION A: EMERGENCY MANAGEMENT PHASES

24. A response is divided into Standby, Alert, Response, Stand down, and Recovery phases.
25. The Standby and Alert phases are covered by the [Biosecurity control measures for abalone viral ganglioneuritis Code of Practice \(Code of Practice\)](#) including identifying and reporting AVG, decontamination procedures, and protocol for decontamination.
26. Information in the [Code of Practice](#) is not repeated in this document, but referenced where relevant.
27. PIRSA emergency management plans use the Australasian Inter-service Incident Management System (AIIMS). This system focuses on functions rather than roles and are designed to be flexible and scalable to reflect the complexity of the incident.

RESPONSE PHASE

28. The Response Phase is entered when AVG (see [Diagnostic Criteria](#)) is confirmed in an area outside of the SZAF, or within an aquaculture licenced area or fish processor.
29. The State Controller (PIRSA) is responsible for implementing the response phases of all strategies and protocols, with consideration of adjacent marine waters. This includes ensuring that the following actions are undertaken.
30. Actions
 - Notify the Minister for Primary Industries and Regional Development, State Controller, Executive Directors, CVO and key stakeholders of confirmed presence of AVG ([Section B](#) and [Section C](#)).
 - The State Controller (PIRSA) appoints an Incident Controller (IC), who then engages an Incident Management Team (IMT).
 - The IMT will consider:
 - Response options ([Section D](#)),
 - Quarantine, Movement Controls and Disease Management Areas ([Section E](#)),
 - Tracing ([Section F](#)),
 - Surveillance ([Section G](#)), and
 - Destruction, Disposal and Decontamination ([Section H](#)).
 - The IMT will also consider:
 - The requirement for Emergency Operations Centres (EOCs) (e.g., State Control Centre (SCC), Local Control Centres (LCCs) or Forward Command Posts (FCPs)).
 - Support required (e.g., mapping, payroll, financial, etc).

- Work health and safety (WHS) issues (including fatigue and stress).

STAND DOWN PHASE

31. A decision to stand down will be made if:
- AVG is considered established in a particular area (e.g., CZAF or WZAF) and an ongoing containment or management strategy implemented, or
 - It is determined that AVG is established and widespread, and considered established, or
 - AVG is eradicated from a land-based abalone farm or fish processor(s).
32. Actions
- Review legislation and policy (review and amend where necessary).
 - Consider long term disease management (e.g., ongoing controls, zoning, surveillance, transition to management under the [Code of Practice](#)).
 - Fisheries and Aquaculture will consider:
 - Fisheries management ([Section J](#)), and
 - Aquaculture management ([Section K](#)).

RECOVERY PHASE

33. Recovery commences at the same time as the response, and many of these actions will already be underway by the time the IMT is stood down and the formal transition to recovery occurs.
34. During the Recovery phase, the recovery team will provide support to the Recovery Facilitator, who in turn reports to the State Controller (PIRSA).
35. Actions
- Engage the State Recovery Office – may or may not trigger state recovery arrangements (i.e., State Recovery Operations Group).
 - Engage with industry and community representatives to identify and support industry and community led recovery initiatives.
 - Ensure necessary technical advice is provided and coordinated.
 - Determine what wellbeing support may be required and coordinate (e.g., Family and Business (FaB) Mentor support).
 - Investigate, and when available administer, financial support.
 - Develop and implement appropriate recovery programs.

SECTION B: COMMUNICATIONS STRATEGY

36. The communications strategy is a key component of the Response Plan and aims to ensure that all relevant stakeholders are appropriately informed of the disease, its status and any calls to action.
37. The [communications strategy](#) describes the trigger, key messages, target audience and methods for each of the standby, alert, response, and stand down phases of the response. Key stakeholders include:
- Commercial and recreational fishers,
 - Abalone aquaculture industry,
 - SA divers,
 - Broader public (including beachcombers, surfers and other aquatic users that may come across dead/moribund abalone washed ashore), and
 - PIRSA staff (including Fisheries and Aquaculture, Biosecurity and SARDI).

SECTION C: INFORMATION AND REPORTING PROTOCOL

38. This section describes the Information and Reporting Protocol activities and outcomes to be achieved by PIRSA during the Response Phase (fisheries or aquaculture).

RESPONSE PHASE

39. If AVG is [confirmed](#), the State Controller (PIRSA) will inform the Minister and appoint an IC to lead the Response. The IC will in turn appoint an IMT.
40. During the response, the following will occur:
- Briefing the Minister.
 - Briefing relevant staff.
 - Notifying and briefing the national AqCCEAD (through CVO).
 - Finalisation of diagnosis / identification.
 - Initial eradication / control strategy development.
 - Public information / media and communications management.

STAND DOWN PHASE

41. Post response, Fisheries and Aquaculture will continue to analyse associated issues, particularly regarding:
- Long term adjustment for fishery (e.g., adjust total allowable commercial catches (TACC)).
 - Long term aquaculture management (e.g., containment, control, zoning).
 - Review of legislation (and amend, where necessary).
42. Post AVG investigation or response, all documentation will be captured in Objective, and details are added to the fish kill database ([A1285106](#)) and PIIMS.
43. Following a Response, the IC will hand over to the Recovery Facilitator to ensure a smooth Transition to Recovery.

SECTION D: RESPONSE OPTIONS

44. This section applies to the response phase. These protocols provide options and guidance for the decision-making process to determine an appropriate disease response strategy to AVG.
45. The following response strategies are in line with the [AQUAVETPLAN Disease Strategy: Abalone viral ganglioneuritis](#).
46. The most appropriate response strategy is that which minimises the socio-economic impact on industry and community (i.e., consider economic benefits and costs of the response strategy to regional communities) in the short- or long-term.
47. The response strategy may depend on the nature and location of the outbreak. Response strategies may include:
- **Eradication** with the aim of returning a newly infected premise or area to freedom from HaHV-1.
 - **Containment, control and zoning** with the aim of placing restrictions in areas in which HaHV-1 infection is endemic to prevent its further spread to uninfected areas.
 - **Control and Mitigation** with the aim of implementing management practices that decrease the incidence and severity of clinical outbreaks.
48. A [National Policy for Confirmed AVG on Farms, In Live Holding Facilities and in the Wild](#) has been developed as a Sub-Committee on Aquatic Animal Health (SCAAH) Out of Session paper. As of November 2025, this document is a draft but may provide guidance on the response strategy.

ERADICATION

49. **Eradication** with the aim of returning a newly infected premise to freedom from AVG.
50. Eradication of disease from closed and semi-closed facilities has been demonstrated and is a viable option.
- AVG has previously been eradicated from three inter-state pump ashore farms, which indicates that there is a high likelihood of success.
51. Eradication of AVG from wild populations cannot be achieved.
52. Eradication may have the highest short-term economic costs, although the greatest economic return on investment.
53. Factors to consider:
- For this response strategy to be successful, early detection and containment of the virus is critical.
 - Eradication should be attempted as soon as possible while the infection is contained.

- The response strategy may change as more information becomes available (if infection is found to be widespread).
- Industry capacity and willingness (support from industry, including use of personnel and equipment, is pivotal to an effective response).
- Emergency harvest is an available option to affected farmers (in eradication area) to minimise economic hardship.
 - Normal harvesting methods and protocols can be applied, although Decontamination protocols should be implemented ([Section H](#)).
- Decontamination of equipment, fomites and infrastructure.

54. Eradication measures include:

- Quarantine and movement controls (stock standstill) to reduce the spread from facility.
 - Consideration should be given to shut off the outlet water from clinically affected tanks.
- Stamping out: destruction, disposal, decontamination.
- Rapid removal of clinically infected, exposed or potentially exposed (but clinically normal abalone).
 - The harvest of stock should occur within the shortest possible timeframe.
 - The full harvesting capacity (personnel and equipment) of the aquaculture farm should be devoted to such an emergency harvest.
 - Product being sold should not be sold live to avoid potential amplification and spread of infection and must only be sold to licenced fish processors. This requirement could be implemented by the publishing of a gazette notice under section 37 of the *Livestock Act 1997*.
 - Staged/partial destock will require a robust testing regime supported by biosecurity practices.
- Surveillance to delimit extent of outbreak within the farm and external surveillance for viral detection in non-endemically infected wild populations.
- Backward tracing (broodstock sources, unprocessed feeds) and forward movements undertaken.

CONTAINMENT, CONTROL AND ZONING

55. ***Containment, control and zoning*** with the aim of placing restrictions in areas in which HaHV-1 infection is endemic to prevent its further spread to uninfected areas.
56. Where AVG is not considered established in the wild, containment, control and zoning is not a preferred option for closed and semi-closed facilities (i.e., land-based aquaculture facilities and fish processors).

57. Depending on location and extent of the outbreak in the wild, options may include:

- Containing the disease within a broad specified region (zone), or
- Limiting spread of disease within a broad or fine scale location.

Option 1 - Containing the disease within a broad specified zone.

58. This option focuses on containing the disease within natural barriers and accepts that containment to a smaller area is unlikely due to spread by vectors (e.g., predators, scavenger species) and fomites (inanimate object such as vessels). Containment is focussed on movement of infectious agents between zones.

59. Legislated (and non-legislated) restrictions would likely focus on movement of abalone and equipment between the infected zone to the rest of the state. Activities within the zone are not specifically controlled.

Option 2 - Limiting spread of the disease to a smaller area within a zone.

60. Containment is focussed on reducing the spread of AVG from infected areas and assumes infected areas can be identified quickly and with some degree of confidence.

61. If there is less certainty of AVG presence in specific locations, larger more general restrictions may be more appropriate.

CONTROL AND MITIGATION

62. **Control and Mitigation** with the aim of implementing management practices that decrease the incidence and severity of clinical outbreaks.

63. Control and mitigation is not favoured in the [AQUAVETPLAN Disease Strategy: Abalone viral ganglioneuritis](#) as mitigation of the disease in wild populations is not considered possible.

64. For farmed abalone, implementing management practices that decrease the incidence and severity of clinical outbreaks is not feasible.

SECTION E: QUARANTINE, MOVEMENT CONTROLS AND DISEASE MANAGEMENT AREAS

65. This section provides guidance for establishing quarantine, movement controls and disease management areas to control movements of infected animals and fomites.
66. The following measures and considerations apply to the Response phase.

ESTABLISHMENT OF QUARANTINE AND MOVEMENT CONTROLS

67. Following the confirmation of AVG (see [Diagnostic Criteria](#)) in abalone held on a land-based Aquaculture licence, quarantine and movement [controls](#) should be considered for animals, equipment, vehicles and vessels, and people to reduce the risk of human induced movement for the pathogen.
68. Pathogen dispersal distance should be considered in the establishment of [disease management areas](#) from the outlet pipes.

ESTABLISHMENT OF DISEASE MANAGEMENT AREAS

69. Following the confirmation of AVG (see [Diagnostic Criteria](#)) in wild abalone populations in the CZAF or WZAF, or marine abalone aquaculture licenced sites located within the CZAF or WZAF, establishing disease management area(s) may reduce the risk of human induced movement for the pathogen.
70. The following factors should be considered when determining the boundary of the disease management area:
- The location of the mortality site(s) and infected area,
 - In the absence of specific information on pathogen dispersal distance in water, a recommended minimum distance of 5 NM (9.26 km), in any direction, from the edge of the infected area to the outer boundary of the control area. This assumed dispersal distance has been used for viral infections previously (Department of Agriculture, 2009; Stevens, 2012),
 - Where possible, it is recommended that landmarks or fishing boundaries (map codes or spatial assessment unit [SAU]) are used to define the boundary and assist interpretation, regulation and compliance.
71. A disease management area could be refined once additional information is available, including:
- Recent observations and knowledge of the area from commercial abalone divers,
 - Location, distribution and density of the abalone populations,
 - Location and distribution of AVG,
 - Reef structure (e.g., continuous or non- continuous reef),
 - Biological characteristics of AVG,

- Oceanography, and
- The need for a contiguous disease management area, if it is in close proximity to another disease management area.

CONTROLS

72. Controls should be considered (based on a risk assessment) on potential pathways of transmission for HaHV-1, and include the following pathways:
- Movement within the wild sector,
 - Movement from the wild to abalone farms,
 - Movement from the wild to processors,
 - Movement from abalone farms to processors,
 - Movement from abalone farms to wild sector,
 - Movement from processors to abalone farms,
 - Movement within and between abalone farms,
 - Movement from processors to wild sector,
 - Movement within and between processors, and
 - Other pathways that may pose a risk for transmission of HaHV-1.
73. In 2025, PIRSA assessed the risk of AVG spread in the CZAF and WZAF of South Australia between the establishment of disease within a previously naive wild population and the disease detected through passive surveillance. (see [A6864691](#)).
- As of November 2025, this document is a draft. This document will need to be reviewed and updated in the event AVG is detected in the CZAF or WZAF.
74. Controls must adopt the least restrictive risk management measures to reduce the risk to a low level, but not to zero.
75. Compliance operations and [stakeholder communication](#) may also need to be increased following the implementation of a disease management area and associated controls (if applicable).

SECTION F: TRACING

76. This section sets out guidelines for tracing a disease outbreak to determine the method and pattern of spread. Tracing investigations are crucial in determining all confirmed and potential locations of the disease, as well as defining restricted and control areas.
77. Both back and forward tracing investigations should be undertaken and cover a designated timeframe.
78. The first priority is to trace back all contacts with infected abalone from origin of the outbreak (aquaculture/wild fishery location), if possible.
79. Tracing forward involves the investigation of all contacts with infected abalone from origin of the outbreak (aquaculture/wild fishery location) to reported site of disease to determine the current location and potential spread of infection.
80. The following items should be traced:
- Abalone and their products,
 - Vehicles and boats - abalone transport vessels and vehicles, feed trucks, other vehicles,
 - Materials and equipment - including diving equipment, aquaculture grading equipment, feed, transport equipment,
 - Personnel - farm workers, abalone divers, other commercial fishers, sales and feed representatives, tradespeople, veterinarians, scientists, technicians, and visitors,
 - Processing facilities, and
 - Recreational divers and fishers.
81. A PIRSA Officer will be appointed to review stock registers from individual licence holders and collect information on stock movement. This should be undertaken within 24 hrs of a suspected outbreak.
82. Tracing forward involves the investigation of all contacts with infected abalone from origin of the outbreak to reported site of disease to determine the current location and potential spread of infection. An up-to-date stock register for each licence holder will significantly aid in determining movements quickly and accurately.

SECTION G: SURVEILLANCE

83. Upon discovery of wild or farmed abalone suspected of being affected by disease (AVG or other), abalone will be collected in accordance with the [Code of Practice](#).
84. This section describes the surveillance that would be used during the Response phase.
85. The [Ausvet](#) website provides numerous tools to calculate sample size depending on surveillance objectives, however the following has been developed based on the documents outlined above.
86. Consideration should be given to employing the assistance of an epidemiologist, if required.
87. AVG surveillance will aim to:
 - determine the extent of spread of AVG (delimitation survey)
 - make decisions regarding any possible changes to the current control area.
88. During the 2024 response to the detection of AVG the target sample size provided for 95% confidence of detecting the virus at a prevalence of greater than or equal to 10%.
89. Diver visual inspection (easily removed abalone) is also a useful surveillance tool and provides an indication of abalone health.
90. Once surveillance has been conducted, further surveillance may be required to monitor the natural spread of the virus. This requirement is contingent upon the initial delimitation of the outbreak.

SECTION H: DESTRUCTION, DISPOSAL AND DECONTAMINATION PROTOCOLS

91. The disposal and decontamination protocols are detailed in the [Code of Practice](#) and provide guiding principles for animals, equipment, vehicles and vessels, and people.
92. The AQUAVETPLAN Operational Procedures Manual for [Destruction](#) and [Disposal](#) and [Decontamination](#) provide specific information about the control of disease agents during an aquatic animal disease emergency.

DESTRUCTION

93. Live abalone may need to be destroyed through appropriate methods in a timely fashion to prevent the spread of AVG.
94. Destruction of abalone is only appropriate where eradication is deemed feasible.

DISPOSAL

95. Disposal of abalone will depend on if they are live, dead or dying:
 - Live abalone that are likely to have been exposed to the virus may be harvested and processed for human consumption if appropriate (see emergency harvest / de-stock sub-section below).
 - The disposal of waste in South Australia is primarily controlled by the [Environment Protection Act 1993](#) and associated environment protection policies. Affected abalone that are dead, dying or are destroyed may be buried, composted or disposed of in a licensed landfill (refer to [Environment Protection Authority \(EPA\) guidelines](#)).
96. In accordance with the [Code of Practice](#), abalone should only be shucked when the vessel has returned to land. Under no circumstances should shells or viscera be dumped at sea.
97. Dead abalone, shells, viscera and rejected product should be bagged (the bags decontaminated with disinfectant prior to disposal) and disposed of in general waste or land fill.
98. Clean-up during and after a mass mortality event on an aquaculture facility is the responsibility of the licence holder. All clean-up will need to be undertaken in accordance with Environment Protection Authority (EPA) guidelines and the [Environment Protection Act 1993](#).
99. Preferred methods for disposal of aquaculture waste material from a mass mortality includes (in order of preference by the EPA, noting some may not be suitable for shell disposal):
 - Composting
 - Reusing / recycling

- Rendering
- Waste depot (landfill)
- On-site burial
- Cremation / burning.

100. Specific guidelines for each method of disposal are available in the [EPA Guidelines for Managing Aquaculture Stock Mortalities](#).

DECONTAMINATION

101. Decontamination involves a combination of physical and chemical procedures that are used to remove soiling and inactivate the target disease organism.
102. Example chemicals for decontamination can be found in Table 1 of the [Code of Practice](#).

SECTION I: LEGAL POWERS

103. In the event of a suspected or confirmed AVG case, a range of legal powers may be required to respond to the incident to minimise the risk of spreading the disease through human activity, depending on the nature and location of the incident.
104. Under Section 63 of the [Livestock Act 1997](#), a Fisheries Officer appointed under the [Fisheries Management Act 2007](#), has all the powers and functions of an inspector under the *Livestock Act 1997* in relation to fish.

REPORTING

105. Abalone herpesvirus (Haliotid herpesvirus-1) is declared a notifiable disease pursuant to section 4 of the [Livestock Act 1997](#), as published in the South Australian Government Gazette (19 December 2024, No. 81 p. 5030).
106. Under section 27 of the [Livestock Act 1997](#), If a person knows or has reason to suspect that livestock or livestock products owned by or under his or her control are affected with, or have died from, a notifiable condition, the person must—
- a) report the existence or suspected existence of the notifiable condition to an inspector by the quickest practicable means; and
 - b) give the Inspector further information reasonably required by the inspector;
 - c) and in the case of a notifiable disease take all reasonable measures to control or eradicate the disease.

CONTROL OF FISHING ACTIVITIES

107. Under Section 79(1) of the [Fisheries Management Act 2007](#), the Minister may gazette a declaration prohibiting certain fishing activities. This gazettal could restrict fishing activity by wording the prohibition appropriately.
108. Under Section 79(1) of the [Fisheries Management Act 2007](#), the Minister or a Fisheries Officer authorised by the Minister, may, as an urgent action, direct a person (or persons) not to engage in fishing activity during a specified period.
109. Under Section 40 of the [Livestock Act 1997](#), Inspectors may take any reasonable action for the control or eradication of disease or contamination. This may include limiting activities in a certain area.

CONTROL OF NON-FISHING ACTIVITIES

110. Under Section 37 of the [Livestock Act 1997](#), the Minister (or the Minister's delegate) may, for the purposes of controlling or eradicating disease or contamination, gazette imposition of one or more requirements set out in Schedule 1 of the *Livestock Act 1997* or any requirement reasonably required in the circumstances. The notice must be for a specified period.

111. Under Section 40 of the [Livestock Act 1997](#) relating to action in emergency situations, Inspectors may take any reasonable action for the control or eradication of disease or contamination. This may include limiting activities in a certain area.

CONTROL OF ENTRY TO A SPECIFIC AREA

112. Under Section 37 of the [Livestock Act 1997](#), the Minister (or the Minister's delegate) may gazette imposition of any requirement reasonably required in the circumstances for a specified period.
113. Under Section 40 of the [Livestock Act 1997](#), Inspectors may take any reasonable action for the control or eradication of disease or contamination. This may include limiting activities in a certain area.

CONTROL OF AQUACULTURE ACTIVITIES

114. Under Section 37 of the [Livestock Act 1997](#), the Minister (or the Minister's delegate) may, for the purposes of controlling or eradicating disease or contamination, gazette imposition of one or more requirements set out in Schedule 1 of the *Livestock Act 1997* or any requirement reasonably required in the circumstances. The notice must be for a specified period.
115. Under Section 40 of the [Livestock Act 1997](#), relating to action in emergency situations, Inspectors may take any reasonable action for the control or eradication of disease or contamination. This may include limiting activities on a certain farm.
116. Under Section 52 of the [Aquaculture Act 2001](#), the Minister (or the Minister's delegate) may vary the conditions of a licence at any time if the variation is considered necessary by the Minister in order to prevent or mitigate significant environmental harm or the risk of significant environmental harm.
117. Under Regulation 13 of the [Aquaculture Regulations 2016](#), the licensee of an aquaculture facility must immediately after becoming aware of the unusually high mortality rate and the licensee knows, or ought reasonably to know, that the organisms are or may be affected with a disease, notify the Minister, of that fact and of as many of the prescribed details as are known at the time of the notification. The licensee must also take all reasonable measures to isolate aquatic organisms apparently affected from aquatic organisms not apparently affected.
118. Under Regulation 14 of the [Aquaculture Regulations 2016](#), a licensee, who knows, or ought to reasonably know, that an aquatic organism being farmed under the licence is or may be affected with a disease, the licensee must ensure that the aquatic organism is not removed from the licence area unless—
- a) it is removed for testing for disease; or
 - b) it is removed for disposal (other than disposal by sale or supply to

another person); or

- c) it is removed in accordance with the written approval of the Minister obtained by the licensee.

SECTION J: ADDITIONAL FISHERIES AND AQUACULTURE MANAGEMENT

119. The following fisheries and aquaculture management actions should be considered following an AVG detection in South Australian waters, including:
- Long-term disease management (ongoing controls, zoning and surveillance),
 - Complete impact assessment process to identify the economic impact to the industry,
 - Engage with industry and community representatives to identify and support industry led recovery initiatives,
 - Ensure technical advice is provided and coordinated,
 - Determine what wellbeing support may be required and coordinate, and
 - Investigate (and possibly administer) financial support.
120. The following fisheries management actions should be considered following an AVG detection in South Australian waters:
- The TACCs should not be adjusted in the quota year in progress,
 - Subsequent TACCs should be set based on the best available scientific information and/or the Management Plan,
 - Adjustment to the TACCs and associated individual transferable quotas (ITQs) in subsequent years may be based on the area, and therefore the potential catch, impacted by the distance,
 - The Management Plan for the commercial abalone fisheries include trigger points and/or decision rules to adjust TACCs and ITQs in response to an AVG outbreak and subsequent reductions in stock biomass, and
 - Relocating healthy abalone into the infected area subject to the most up to date scientific information at the time could be considered.
121. The following aquaculture management actions should be considered following an AVG detection and eradication on farm:
- A farm, previously declared free from AVG but in which the disease is detected, can be declared free from AVG under the Abalone Health Accreditation Program (AHAP) when conditions have been met (Criteria 4, AHAP).
 - The AHAP provides technical guidelines for the land-based abalone aquaculture sector to maintain a farm “compartment” free of AVG.
 - The AHAP incorporates initial surveillance testing and ongoing testing for the virus that causes AVG (HaHV-1). The program requires annually audited biosecurity plans including a component that addresses surveillance outside the farm for the virus in wild populations. The AHAP is overseen by the competent authority (State government) and includes a Standard Operating Procedure (SOP) outlining steps required to achieve accreditation.

- For further information, see: [Abalone Health Accreditation Program](#).

ACRONYMS

AAH	Aquatic Animal Health
AIIMS	Australasian Inter-service Incident Management System
AqCCEAD	Aquatic Consultative Committee on Emergency Animal Diseases
AQUAVETPLAN	Australian Aquatic Veterinary Emergency Plan
AVG	Abalone Viral Ganglioneuritis
CVO	Chief Veterinary Officer
CZAF	Central Zone Abalone Fishery
ED	Executive Director
EM	Emergency Management
EOC	Emergency Operations Centre
EPA	Environment Protection Authority
FaB	Family and Business Support
FCP	Forward Command Post
IC	Incident Controller
IMT	Incident Management Team
LCC	Local Control Centre
PCR	Polymerase chain reaction
PIRSA	Department of Primary Industries and Regions
SARDI	South Australian Research and Development Institute
SCAAH	Sub-Committee on Aquatic Animal Health
SEMP	State Emergency Management Plan
SCC	State Control Centre
WHS	Work Health and Safety
WOAH	World Organisation for Animal Health
WZAF	Western Zone Abalone Fishery

GLOSSARY

Agent	The biological agent that causes disease. In the case of AVG, the agent is a virus. See also <i>disease</i> .
AQUAVETPLAN Australian Aquatic Veterinary Emergency Plan.	A series of technical response manuals prescribed by the Department of Agriculture, Fisheries and Forestry (Australian Government) that describe the proposed Australian approach to an emergency aquatic animal disease incident.
Chief Veterinary Officer / Chief Inspector of Stock (CVO / CIS)	The senior veterinarian of the animal health authority in South Australia (PIRSA Animal Health) who has responsibility for animal disease control in this State.
Containment	The process of containing a disease outbreak to within defined areas (declared, restricted and control areas).
Control	Reduction in morbidity and mortality from disease by measures intended to interfere with the unrestrained occurrence of disease.
Control area	A buffer between the restricted area and areas free from disease. Restrictions on this area will reduce the likelihood of the disease spreading further. As the extent of the outbreak is confirmed, the control area may reduce / increase in size. In most cases, permits will be required to move animals and specified product out of the control area into the free area.
Declared area	A defined tract of land or water that is subjected to disease control restrictions under emergency animal disease legislation. Types of declared areas include restricted area, control area, infected premises, dangerous contact premises and suspect premises.
Decontamination	Includes all stages of cleaning and disinfection.
Disease	A general term for, in this case, AVG and / or abalone herpesvirus (HaHV-1). See also <i>agent</i> .
Disinfectant	A chemical used to destroy disease agents outside a living animal.
Disinfection	The application, after thorough cleansing, of procedures intended to destroy disease agents; applies to premises, vessels, vehicles and other objects that may have been directly or indirectly contaminated.
Disposal	Sanitary removal of fish / abalone waste, effluent water and any other contaminated objects by burial, burning or some other process so as to prevent the spread of disease.
Electron microscopy	A diagnostic method used in pathology to detect and identify a disease agent. Electron microscopes can magnify specimens up to 2 million times. See also <i>histology and PCR</i> .
Emergency animal disease	A disease that is (a) exotic to Australia or (b) a variant of an endemic disease or (c) a serious infectious disease of unknown or uncertain cause or (d) a severe outbreak of a known endemic disease, and that is considered to be of national significance with serious social or trade implications.
Eradication	Refers to the elimination of an infectious agent from a specified area.
Fomite	Refers to any inanimate object or substance capable of carrying an infectious agent (i.e. virus) and hence transferring them from one host to another. See also <i>vector</i> .
Free area	An area known to be free from the disease agent.

Histology	A diagnostic method used in pathology to detect the presence of disease and disease agents in samples. Histology is the study of the microscopic anatomy of cells and tissues, and is performed by examining thin slices of tissue under a light microscope (up to 2000 times magnification). See also <i>electron microscopy and PCR</i> .
Infected premises or area	The premises or area in which the disease has been confirmed. Definition of an 'infected area' is more likely to apply to an open system, such as a sea-based aquaculture farm or wild fishery.
Monitoring	Routine collection of data for assessing the health status of a population. See also <i>surveillance</i> .
Movement control	Restrictions placed on the movement of fish, abalone, people and other things to prevent the spread of disease.
Polymerase chain reaction (PCR)	A method of amplifying specific DNA sequences to detectable levels that can be used to detect the presence of DNA from a disease agent. See also <i>electron microscopy and histology</i> .
Premises or area	A production site or area of marine waters. A production site may range from an aquarium to an aquaculture lease in the open ocean.
Quarantine	Legal restrictions imposed on a place, abalone, vehicles, or other things, limiting movement.
Restricted area	The area around an infected premises (or area), likely to be subject to intense surveillance and movement controls. Movement of potential vectors of disease out of the area will, in general, be prohibited. Movement into the restricted area would be by permit only. Multiple restricted areas may exist within one control area.
Surveillance	A systematic series of investigations of a given population to detect the occurrence of disease for control purposes, and which may involve testing samples of a population.
Susceptible animal	Animal that can be infected with a particular disease agent.
Tracing	The process of locating animals, persons or other items that may be implicated in the spread of disease, so that appropriate action can be taken.
Vector	A living organism that transmits an infectious agent from one host to another. A biological vector is one in which the infectious agent must develop or multiply before becoming infective to a recipient host. A mechanical vector is one that transmits an infectious agent from one host to another but is not essential to the lifecycle of the agent. See also <i>fomite</i> .
Zoning	The process of defining disease-free and infected areas.