

Appendix 13 Schedule 3V

Schedule 3V

SALMONID FINFISH ANNUAL VIDEO SURVEY:

REQUIREMENTS FOR A SALMONID FINFISH LEASE AREA.

1. Outline of Requirements

The Video Survey is to be conducted in accordance with specifications in this Schedule and any requirements of the Director, Marine Resources, and undertaken by a person(s) or organisation(s) authorised by the Director, to undertake the work at the sites specified.

The survey is to be conducted once every 12 months or in accordance with the stocking and fallowing regime employed on the marine farm. The timing of this survey is to be determined through consultation with the Marine Farming Branch of the Department in January each year.

The lease holder must provide data to the Department in respect to feed input (totals by pen bay) and in situ cleaning activity (total by method by pen bay) on the Lease area for the preceding 12 months in Microsoft Excel format. This information, together with the chosen filming date must be submitted to the Department no later than one week prior to the expected video survey date.

Where a survey cannot be undertaken as planned, the lease holder must notify the Department and advise of the revised survey date on (03) 6233 3370, or email mfarming.environment@dPIPWE.tas.gov.au.

All filming is to be conducted on one day, or two or three consecutive days if not feasible on a single day.

A survey report must be submitted to the Department by the applicant within **1 month** of conducting the video survey.

If the survey reveals any environmental problems, further video analysis and/or sampling may be required.

The underwater video survey for salmonid finfish marine farming includes the following components:

2. Underwater video survey specifications
3. Video survey report
4. Map

2. Underwater Video Survey Specifications

2.1 Spot Dives

Compliance sites:

The video survey is to be conducted at positions specified by the Department prior to the survey.

A differential GPS must be used to locate specified dive locations and each spot dive must record a minimum of three minutes of video footage in accordance with the filming procedure outlined below. GPS coordinates in GDA 94 MGA Zone 55 datum must be recorded for each spot dive.

Should transects be required, the transect line must consist of a weighted line of known diameter with clearly marked tags 5 metres apart.

Pen sites:

In addition to the regulatory spot dives, a total of six sites must be filmed inside the lease area. GDA 94 MGA Zone 55 co-ordinates of each within lease spot dive must be recorded. Spot dives within the lease area may be performed at the same time as the regulatory spot dives, or alternatively the dives may be undertaken during the current survey year as part of normal on farm monitoring practices and video footage submitted when the regulatory parallel spot dives have been completed.

Sites filmed must include those that have been subjected to the heaviest stocking pressure in the lease area. For fallowed sites this would include pen bays that received the highest feed input prior to fallowing and for stocked sites this would include sites that have received the highest cumulative feed input for the current stocking cycle.

The number of spot dives or transects and fallowed/stocked sites filmed may vary according to lease area and previous compliance with environmental licence requirements.

2.1.1 Filming Procedure

Compliance sites:

For regulatory spot dives filming must be conducted slowly to ensure clear images of the seabed in the vicinity of the anchor marking the spot dive are recorded. Each spot dive site number must be clearly identified on the video footage. Footage must show a minimum of three minutes of clear footage. Filming is to include sufficient coverage of the sediments in the vicinity of the dive site together with some stationary footage recorded with the camera lens pointing vertically down. The sediment must be disturbed and video footage recorded to assess presence of outgassing (i.e. sediment is to be disturbed and camera tilted up to the vertical so that any ascending bubbles can be seen)

If an ROV is used and tethered to a shot line ensure that if sediments are stirred up, the ROV can move to clear water showing undisturbed sediments and providing optimal visibility.

Where relevant, filming is to be conducted with the transect line in view. Each transect must be identified on the film with the appropriate transect number e.g. T1, T2. Filming must be conducted slowly along the transect line to ensure that clear images of the transect line and seabed are recorded. For a transect, stationary video footage must be obtained at three points specified on the survey map with the camera lens pointing vertically downward with the transect line in view. The sediment must be disturbed and filmed at each specified site along the transect including vertical footage to check for the presence of outgassing on disturbance.

Pen sites:

When performing a spot dive at a stocked bay, filming must extend slowly from the cage edge to the centre of the cage on a compass bearing. Prior to diving, footage on the surface showing the pen and compass bearing must be recorded. At fallowed pen bays filming should extend across at least half of the cage footprint. Sediment must be disturbed and vertical footage obtained as described above to check for the presence of outgassing as close as possible to the centre of the pen footprint.

2.1.2 Equipment

All video footage is to be colour and in a standard digital format (or equivalent). Clear, well lit images on high quality discs are required. The camera / ROV must be capable of operating at a minimum of 3 lux. A record of the date, time and location of filming (control/transect/farm dive) must be provided at the start of each filming sequence.

Underwater housing to suit the camera must be used and fitted with a minimum of 2 x 50W lights or equivalent in LEDs.

One DVD copy of the underwater footage must be submitted with the report.

3 The Video Survey Report

A report must be submitted within **one month** of conducting the survey and include the following:

- Date, time and weather conditions with respect to each episode of filming
- Completed Microsoft Access database file (refer below)
- A summary table outlining dive numbers, time of dive (OSD on ROV) and completion of dive (OSD on ROV) and whether a farm dive was stocked or fallow
- comments/summary of the information contained in the MS Access database specific to this survey
- a section clearly identifying sites at which spontaneous outgassing was present and where any compliance sites exhibited signs of farming activity
- intended farm stocking management plan for the site over the next year
- a copy of digital footage specific to the survey
- a map of the lease area identifying the position of all spot dive locations, including the position of internal pen bay spot dives.
- Unless otherwise specified, DGPS files DXF (Drawing Exchange Format)/ESRI (Environmental Systems Research Institute) shape file format providing position fixes and at least one spm (State permanent mark) reference fix. Data files are to include date and time attributes.

All aspects of visual assessment and interpretation must be consistent with section 7.2, Macleod and Forbes 2004.

The report document, footage and database is to be submitted by the licence holder to the Marine Farming Branch of the Department.

4. Map

A map of the marine farming lease area identifying the 35 metre spot dive locations or transects will be provided to the Lease holder prior to the survey. A map showing surveyed positions within the lease, including GDA 94 MGA Zone 55 co-ordinates, must be submitted with the survey report.

References

Macleod, C., Forbes, S., Bisset, A., Burke, C., Crawford, C., Holdsworth, D., Nichols, P., Revill, A., and Volkman, J. (2004) Guide to the assessment of sediment condition at marine finfish farms. Aquafin CRC Project 4.1 Extension report to FRDC. Tasmanian Aquaculture & Fisheries Institute.