



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **SFIAQUA201C Collect broodstock and seedstock**

**Release: 1**

## **SFIAQUA201C Collect broodstock and seedstock**

### **Modification History**

Not Applicable

## Unit Descriptor

Unit descriptor	<p>This unit of competency involves routinely collecting broodstock and seedstock, and transporting it to an aquaculture or an ornamental facility. It covers interpreting instructions, using equipment appropriately, and may involve operations, such as sorting, grading, handling and moving <b><i>cultured or held stock</i></b>. It may also cover receipt and initial care of the stock once it reaches the aquaculture facility. This unit does not cover crocodiles or the collection of gastropod or bivalve molluscs or other aquatic broodstock or seedstock from the sea by qualified divers (refer to SFIDIVE series). Live transport of broodstock and seedstock is covered in SFISTOR204A Prepare, pack and dispatch stock for live transport.</p> <p>Licensing, legislative, regulatory or certification requirements may apply to this unit. Therefore it will be necessary to check with the relevant state or territory regulators for current licensing, legislative or regulatory requirements before undertaking this unit.</p>
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## Application of the Unit

Application of the unit	<p><b>Licences may be required:</b></p> <ul style="list-style-type: none"> <li>• if diving</li> <li>• if operating:             <ul style="list-style-type: none"> <li>• load-shifting equipment, including forklifts</li> <li>• vehicles</li> <li>• vessels.</li> </ul> </li> </ul> <p>All enterprise or workplace procedures and activities are carried out according to <b><i>relevant government regulations, licensing and other compliance requirements, including occupational health and safety (OHS) guidelines, food safety and hygiene regulations and procedures, and ecologically sustainable development (ESD) principles.</i></b></p> <p>Equipment operation, maintenance, repairs and calibrations are undertaken in a safe manner that conforms to manufacturer instructions. Appropriate <b><i>personal protective equipment (PPE)</i></b> is selected, checked, used and maintained.</p>
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## Licensing/Regulatory Information

Refer to Unit Descriptor

## Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for collection	<p>1.1. Instructions about <i>collection requirements</i> and <i>equipment</i> are received from supervisor.</p> <p>1.2. Required collection equipment is collected and checked for serviceability.</p> <p>1.3. Sub-standard equipment is repaired or discarded according to manufacturer guidelines.</p> <p>1.4. Equipment is transferred into <i>collection vehicle</i>, transported to collection area and readied for use.</p>
2. Collect and transport stock	<p>2.1. <i>Broodstock</i> or <i>seedstock</i> is collected and graded according to <i>quantity and quality requirements</i>.</p> <p>2.2. Broodstock or seedstock is packed for transport.</p> <p>2.3. Broodstock or seedstock is transported to farm and <i>treated</i> as appropriate.</p> <p>2.4. Broodstock or seedstock is transferred into <i>culture or holding structures</i>.</p> <p>2.5. Broodstock or seedstock is handled in a way which minimises stress or damage.</p>
3. Complete post-collection activities	<p>3.1. Clean up of work area, including repairs and storage of equipment, is supervised, and condition report prepared.</p> <p>3.2. Relevant collection data, observations or information are recorded legibly and accurately, and any out of range or unusual records are checked.</p> <p>3.3. Compliance and other required reports are prepared and conveyed to senior personnel advising of the effectiveness of the broodstock and seedstock collection activities, and recommendations made for improvements.</p> <p>3.4. Feedback on own work performance is sought from supervisor and opportunities to improve identified.</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

**REQUIRED SKILLS AND KNOWLEDGE**

- communicating ideas on possible improvements
- communicating with supervisor on collection activities and on own performance
- maintaining and repairing collection, transport and holding equipment
- operating collection, transport and holding equipment
- providing oral reports to supervisor on operation irregularities
- recognising normal and abnormal stock behaviour.

**Literacy skills used for:**

- interpreting collection requirements
- recording collection information.

**Numeracy skills used for:**

- counting stock and containers.

**Required knowledge**

- behaviour of stock in relation to the collection of broodstock and seedstock from the wild
- causes of stress and damage in stock and methods to overcome these
- collection, transport and holding equipment operating methods, maintenance and repairs
- effects of water and weather conditions on stock and OHS of employees
- work procedures for collecting broodstock and seedstock

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment evidence required to demonstrate competence in this unit</b>	<p>Assessment must confirm ability to:</p> <ul style="list-style-type: none"> <li>• collect, transport and hold broodstock and seedstock according to collection requirements</li> <li>• follow supervisor's instructions</li> <li>• minimise stress and damage to stock.</li> </ul> <p>Assessment must confirm knowledge of:</p> <ul style="list-style-type: none"> <li>• causes of stress and damage to stock</li> <li>• collection, transport and holding equipment operation consistent with working procedures and manufacturer guidelines.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment is to be conducted at the workplace while collection, transport and holding are underway or in a simulated work environment.</p> <p>Resources may include:</p> <ul style="list-style-type: none"> <li>• collection, transport and holding equipment, work procedures and manufacturer guidelines for operation</li> <li>• culture structures with/in water containing stock exhibiting a range of quality parameters</li> <li>• data sheets for recording information</li> <li>• harvest or collection schedule</li> <li>• work procedures for collection, transport and holding stock.</li> </ul>
<b>Method of assessment</b>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• demonstration</li> <li>• written or oral short-answer testing.</li> </ul>
<b>Guidance information for assessment</b>	This unit may be assessed holistically with other units within a qualification.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Cultured or held stock*** may include:

- adults, broodstock (ready to breed), seedstock or stockers, eggs and sperm, fertilised eggs, larvae, post-larvae, seed, spat, hatchlings, yearlings, juveniles, fry, fingerlings, yearlings, smolt, sporophytes, seedlings and tissue cultures
- finfish, crustaceans, molluscs, aquatic reptiles, amphibians, polychaete and oligochaete worms, plankton, micro-algae, seaweed, aquatic plants, live rock, sponges and other aquatic invertebrates
- for human consumption (seafood), stockers for other farms, stockers for conservation or recreational fishing, display or companion animals (ornamentals), and other products, including pearls, skins, shells, eggs, chemicals and pigments
- wild caught, hatchery or nursery reared.

***Relevant government regulations, licensing and other compliance requirements*** may include:

- biodiversity and genetically modified organisms
- biosecurity, translocation and quarantine
- business or workplace operations, policies and practices
- correct marketing names and labelling
- environmental hazard identification, risk assessment and control
- food safety/Hazard Analysis Critical Control Point (HACCP), hygiene and temperature control along chain of custody, and Australian Quarantine Inspection Service (AQIS) Export Control (Fish) orders
- health and welfare of aquatic animals
- maritime operations, safety at sea and pollution control
- OHS hazard identification, risk assessment and



RANGE STATEMENT	
	control.
<i>OHS guidelines</i> may include:	<ul style="list-style-type: none"> <li>• appropriate workplace provision of first aid kits and fire extinguishers</li> <li>• codes of practice, regulations and/or guidance notes which may apply in a jurisdiction or industry sector</li> <li>• enterprise-specific OHS procedures, policies or standards</li> <li>• hazard and risk assessment of workplace, maintenance activities and control measures</li> <li>• induction or training of staff, contractors and visitors in relevant OHS procedures and/or requirements to allow them to carry out their duties in a safe manner</li> <li>• OHS training register</li> <li>• safe lifting, carrying and handling techniques, including manual handling, and the handling and storage of hazardous substances</li> <li>• safe systems and procedures for outdoor work, including protection from solar radiation, fall protection, confined space entry and the protection of people in the workplace</li> <li>• systems and procedures for the safe maintenance of property, machinery and equipment, including hydraulics and exposed moving parts</li> <li>• the appropriate use, maintenance and storage of PPE.</li> </ul>
<i>Food safety and hygiene regulations and procedures</i> may include:	<ul style="list-style-type: none"> <li>• Australian Shellfish Sanitation program</li> <li>• equipment design, use, cleaning and maintenance</li> <li>• exporting requirements, including AQIS Export Control (Fish) orders</li> <li>• HACCP, food safety program, and other risk minimisation and quality assurance systems</li> <li>• location, construction and servicing of seafood premises</li> <li>• people, product and place hygiene and sanitation requirements</li> <li>• Primary Products Standard and the Australian Seafood Standard (voluntary)</li> <li>• product labelling, tracing and recall</li> <li>• receipt, storage and transportation of food,</li> </ul>

<b>RANGE STATEMENT</b>	
	<p>including seafood and aquatic products</p> <ul style="list-style-type: none"> <li>• requirements set out in Australian and New Zealand Food Authority (ANZFA) Food Standards Code and state and territory food regulations</li> <li>• temperature and contamination control along chain of custody.</li> </ul>
<b><i>ESD principles</i></b> may include:	<ul style="list-style-type: none"> <li>• applying animal welfare ethics and procedures</li> <li>• control of effluents, chemical residues, contaminants, wastes and pollution</li> <li>• improving energy efficiency</li> <li>• increasing use of renewable, recyclable and recoverable resources</li> <li>• minimising noise, dust, light or odour emissions</li> <li>• preventing live cultured or held organisms from escaping into environment</li> <li>• reducing emissions of greenhouse gases</li> <li>• reducing energy use</li> <li>• reducing use of non-renewable resources</li> <li>• undertaking environmental hazard identification, risk assessment and control.</li> </ul>
<b><i>PPE</i></b> may include:	<ul style="list-style-type: none"> <li>• gloves, mitts or gauntlets, and protective hand and arm covering</li> <li>• buoyancy vest or personal floatation device (PFD)</li> <li>• hard hat or protective head covering</li> <li>• non-slip and waterproof boots (gumboots) or other safety footwear</li> <li>• personal locator beacon or Emergency Position Indicating Radio Beacon (EPIRB)</li> <li>• protective outdoor clothing for tropical conditions</li> <li>• safety harness</li> <li>• sun protection (e.g. sun hat, sunscreen and sunglasses)</li> <li>• uniforms, overalls or protective clothing (e.g. mesh and waterproof aprons)</li> <li>• waterproof clothing (e.g. wet weather gear and waders).</li> </ul>
<b><i>Collection requirements</i></b> may	<ul style="list-style-type: none"> <li>• collection equipment</li> <li>• quantities and qualities of stock to be collected</li> </ul>

<b>RANGE STATEMENT</b>	
include:	<ul style="list-style-type: none"> <li>• work instruction-time, location and time required.</li> </ul>
<b>Equipment</b> may include:	<ul style="list-style-type: none"> <li>• anaesthetics, syringes, darts, guns and restraints</li> <li>• bait, burley and attractants</li> <li>• bins</li> <li>• bivalve seed collectors: <ul style="list-style-type: none"> <li>• racks, sticks, tubes and slats</li> <li>• Christmas tree rope</li> <li>• mesh bags</li> </ul> </li> <li>• buckets</li> <li>• diving equipment (e.g. breath holding or compressed air)</li> <li>• harvesting equipment: <ul style="list-style-type: none"> <li>• traditional fishing equipment</li> <li>• dilly nets, drop nets, scoop nets, trawl/prawn nets, cast nets, gill nets, traps (e.g. bait and opera house traps), wing nets and snares</li> <li>• flow traps</li> <li>• hand lines and fishing lines</li> <li>• crowd nets and fish pumps or brails</li> <li>• hides or substrate (used with dip nets)</li> <li>• dredges</li> <li>• electrofishers</li> </ul> </li> <li>• holding and transport equipment</li> <li>• oxygen supply</li> <li>• tanks</li> <li>• transport water and treatment equipment</li> <li>• troughs.</li> </ul>
<b>Collection vehicle</b> may include:	<ul style="list-style-type: none"> <li>• car, truck and utility</li> <li>• charter helicopter or plane</li> <li>• motorbike</li> <li>• vessel.</li> </ul>
<b>Broodstock</b> may include:	<ul style="list-style-type: none"> <li>• mature (adult forms)</li> </ul>
<b>Seedstock</b> may include:	<ul style="list-style-type: none"> <li>• immature forms</li> </ul>
<b>Quantity requirements</b> may include:	<ul style="list-style-type: none"> <li>• number</li> <li>• volume</li> </ul>

RANGE STATEMENT	
	<ul style="list-style-type: none"> <li>weight.</li> </ul>
<i>Quality requirements</i> may include:	<ul style="list-style-type: none"> <li>health and activity status</li> <li>life cycle stage</li> <li>physical appearance, colour and body shape</li> <li>sex</li> <li>size</li> <li>spawning condition.</li> </ul>
<i>Treated</i> may include:	<ul style="list-style-type: none"> <li>acclimatisation</li> <li>quarantine</li> <li>recovery.</li> </ul>
<i>Culture or holding structures</i> may include:	<ul style="list-style-type: none"> <li>cages, pontoons, enclosures and pens</li> <li>dams, ponds and pools, tanks and raceways</li> <li>hatcheries and nurseries</li> <li>longlines, rafts, racks and trays, and fences.</li> </ul>

## Unit Sector(s)

Unit sector	Aquaculture operations
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## Co-requisite units

Co-requisite units	

## Competency field

Competency field	
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