Modification history

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 1.0

SFIAQU504	Plan and implement environmentally sustainable aquacultural practices
Application	This unit of competency describes the skills and knowledge required to develop an environmental management strategy that involves researching, planning and implementing effective practices for waste management, energy and water conservation, and managing wildlife. This unit applies to individuals who have specialised knowledge and technical and/or managerial responsibility for planning and implementing environmentally sustainable strategies, systems and practices within an aquaculture setting. No licensing, legislative or certification requirements apply to this unit at the time of publication.
Prerequisite Unit	Nil
Unit Sector	Aquaculture (AQU)

Elements	Performance Criteria
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Research environmental strategies	1.1 Assess environmental and aesthetic values of workplace location 1.2 Assess strategies for their effectiveness in reducing environmental impacts on the workplace, including ongoing reduction of waste, energy use, water efficiency and adverse impacts with wildlife and other resource users and uses 1.3 Obtain professional assistance appropriate to complexity of task and financial risk involved, and consult appropriate bodies 1.4 Research mechanisation or automation of process or activity, including use of specialised contract services, in line with workplace practices
2. Prepare environmental management plan	2.1 Design environmental management plan based on risk identification and mitigation procedures 2.2 Incorporate requirements of business plan, production plan and other planning parameters in the environmental management plan, ensuring it is achievable with workplace resources and budget 2.3 Identify and allocate financial and other resources for environmental management within workplace 2.4 Ensure environmental management strategies comply with legislative requirements and are incorporated into risk mitigation procedures 2.5 Identify and address any community concerns in the development of strategies 2.6 Develop and document water quality and ongoing environmental monitoring plans, and communicate areas of responsibility to staff 2.7 Incorporate newly available technologies into environmental management strategies if practicable and feasible

Elements	Performance Criteria
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
3. Establish a waste management system	3.1 Identify wastes and outputs for inclusion in waste water management system 3.2 Collect, treat and store waste water and re-use as part of management system 3.3 Obtain materials and consumables used by workplace, from recycled or re-useable materials in quantities that result in packaging and waste reduction 3.4 Use composting, shredding, re-using and recycling according to workplace procedures 3.5 Identify waste disposal contractors, negotiate terms and award business according to environmental management plan 3.6 Monitor performance of contract and take action where variance is identified
4. Conserve energy resources	4.1 Manage and operate machinery efficiently to reduce fuel usage and emissions or discharges 4.2 Source energy used for heating, cooling, lighting and operation of remote appliances from alternative sources where appropriate and available 4.3 Design buildings and structures, taking into consideration the use of passive energy for lighting, heating and shelter
5. Conserve water resources	5.1 Manage water to optimise its use according to the environmental management plan 5.2 Minimise contamination with chemicals and wastes through sound utilisation strategies 5.3 Use settlement ponds, effluent treatment works and waste reduction processes appropriately
6. Minimise adverse interactions with wildlife and other resource users	6.1 Identify and assess potential interactions with wildlife and other resource users for adverse impacts 6.2 Develop strategies to mitigate adverse interactions
7. Undertake an environmental audit	7.1 Complete environmental audit, taking into consideration all relevant factors 7.2 Prepare reports according to workplace, customer and legal requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	• Researches and analyses technical information from a range of sources • Interprets business and legal requirements in documentation
Writing	• Prepares plans and audit reports using appropriate format, clear language and correct technical terminology
Numeracy	• Measures waste and water and energy usage to calculate efficiencies • Quantifies resource costs relevant to environmental management plan • Assesses financial risk
Oral communication	• Participates in verbal exchanges to convey and explain information clearly using language appropriate for the audience
Navigate the world of work	• Understands legislative and regulatory requirements and recognises problems that have the potential to become issues, taking steps to address them before they escalate
Interact with others	• Liaises collaboratively with a range of personnel both internal and external to the workplace
Get the work done	• Uses systematic, analytical processes to identify and solve problems and make decisions relating to environmentally sustainable aquaculture practices • Uses workplace digital systems and tools to access, organise and analyse data and information relevant to environmentally sustainable aquaculture practices

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
SFIAQU504 Plan and implement environmentally sustainable aquacultural practices	SFIAQUA504C Plan environmentally sustainable aquacultural practices	Updated to meet Standards for Training Packages Revised unit title to better reflect outcomes Element divided for clarity	Equivalent unit

Links	
	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273

TITLE	Assessment requirements for SFIAQU504 Plan and implement environmentally sustainable aquacultural practices

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.
There must be evidence that the individual has planned for the implementation of environmentally sustainable aquacultural practices for an aquaculture facility on at least one occasion, including:

- researching and assessing the effectiveness of environmentally sustainable strategies and resource requirements for the facility
- developing an environmental management plan based on risk assessment and allocated resources, which includes strategies for implementing environmentally sustainable practices for:
  - conserving energy resources
  - managing water use
  - minimising waste
  - minimising adverse interactions with wildlife
- reviewing and reporting on the environmental management plan.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environmental control standards relevant to aquaculture practices
- legislative requirements relevant to environmentally sustainable aquaculture practices
- environmental risk identification and reduction
- principles of composting and waste management
- principles of integrated and sustainable agriculture and aquaculture systems
- features of antibiotic, pesticide and herbicide resistance
- effect of effluent on plants, animals and environment
- principles of energy flows and food webs
- key features of land and drainage catchment and coastal processes
- impact of noise, dust, odour and light control on aquaculture operations
- principles of nutrient cycling
- options for mechanisation or automation of process or activity
- soil testing processes and procedures and results interpretation
- options for use of specialised contract services.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
  - skills must be demonstrated in an aquaculture workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
  - workplace business, operational and financial information
  - technology for researching and documenting information
- relationships:
  - evidence of interactions with relevant personnel.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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