

<b>Title</b>	<b>Explain the principles of electric fishing and safely operate electric fishing equipment</b>		
<b>Level</b>	<b>5</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with the unit are able to explain: electrical principles and terminology relevant to electric fishing; the safe use of electric fishing equipment; the effects of electric fishing on aquatic life; the legislation, ethical and cultural requirements when using electric fishing equipment; and explain the operation of, and safely operate, electric fishing equipment.
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<b>Classification</b>	Seafood > Aquaculture
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<b>Available grade</b>	Achieved
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<b>Entry information</b>	
<b>Critical health and safety prerequisites</b>	Hold a current Cardio Pulmonary Resuscitation (CPR) certificate, or demonstrate equivalent knowledge and skills.

### Explanatory notes

- Definitions  
*Conductivity switch* may also be known as the safety switch or the sensitivity switch.  
*Company requirements* refer to instructions to staff on policy and procedures which are communicated in verbal or written form. These requirements may include but are not limited to – manufacturers' procedures, company safety procedures, legislative requirements, industry codes of practice and standards.
- Legislation requirements* refer to areas of the law that relate to electric fishing and include but are not limited to – AS/NZS 60335.2.86: 2002 *Household and similar electrical appliances – Safety – Particular requirements for appliances for electric fishing machines*, Health and Safety in Employment Act 1992, Freshwater Fisheries Regulations 1983.

### Outcomes and evidence requirements

#### Outcome 1

Explain electrical principles and terminology relevant to electric fishing.

**Evidence requirements**

- 1.1 The explanation includes the types of electrical currents used in both the main set and backpack and the reasons for them.  
Range direct current, alternating current, pulsed direct currents.
- 1.2 The explanation includes electrical terminology associated with electric fishing.  
Range conductivity; insulation; parallel, series and interrupted circuits.
- 1.3 The explanation includes the measurements and calculations used in electricity.  
Range Ohm's law, voltage, current, resistance.

**Outcome 2**

Explain the safe use of electric fishing equipment.

Range main set, backpack.

**Evidence requirements**

- 2.1 The explanation includes the recommended number of operators, and their individual roles and responsibilities in the respective electric fishing operations.  
Range designated leader, electric fisher/s, safety observer.
- 2.2 The explanation includes an awareness of risks of exposure to electricity and the factors that may increase these risks.
- 2.3 The explanation includes details of safety features built into the equipment.  
Range deadman switch, isolation switch, conductivity switch;  
backpack only – tilt switch, insulation and water proofing.
- 2.4 The explanation includes the safety equipment required for each operator and the purpose of that equipment in accordance with company requirements.
- 2.5 The explanation includes the safe working conditions required when using electric fishing equipment.  
Range environment, weather, backup, assistance, location.
- 2.6 The explanation includes the certification requirements for each of the electric fishing machines.

**Outcome 3**

Explain the effects of electric fishing on aquatic life.

**Evidence requirements**

3.1 The explanation includes the possible reaction stages of the target aquatic species during the operation of electric fishing equipment.

Range may include but is not limited to – reaction to anode, inhibition, forced swimming, narcosis, pseudo forced swimming, tetany.

3.2 The explanation includes the potential effects on aquatic species resulting from exposure to electric fishing.

Range includes but is not limited to – stress, recovery time.

3.3 The explanation includes the operational practices used to minimise the effects of exposure to electric fishing on aquatic species.

**Outcome 4**

Explain the legislation, ethical and cultural requirements when using electric fishing equipment.

**Evidence requirements**

4.1 The explanation includes the legislation requirements that may apply to electric fishing.

4.2 The explanation includes the ethical and cultural requirements when using electrical fishing equipment.

**Outcome 5**

Explain the operation of, and safely operate, electric fishing equipment.

Range main set, backpack.

**Evidence requirements**

5.1 The explanation includes the set up of the electric fishing machines and their external working equipment.

Range anode, cathode, controls.

5.2 The explanation includes the environment conditions that impact on the electric fishing operation.

5.3 The electric fishing and personal safety equipment is checked prior to set up in accordance with company requirements.

- 5.4 The electric fishing equipment is set up ready for safe operation in accordance with company requirements.
- 5.5 The electric fishing equipment is operated for the efficient capture of the aquatic species in accordance with company requirements.
- 5.6 The electric fishing equipment is operated in accordance with the required safety precautions and recommended number of operators, as per company requirements.
- 5.7 The electric fishing equipment is cleaned, maintained and stored correctly after use, in accordance with company requirements.

<b>Planned review date</b>	31 December 2014
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	16 December 2003	31 December 2012
Review	2	20 April 2006	31 December 2012
Review	3	17 June 2011	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0123
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

#### Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

#### Comments on this unit standard

Please contact the Seafood ITO [admin@seafood.co.nz](mailto:admin@seafood.co.nz) if you wish to suggest changes to the content of this unit standard.