

## Critical Task Hazard Analysis Worksheet

Critical Task: Electrofishing

### Notes:

- This Task Hazard Analysis (THA) is in response to the Canada Labour Code Part II, the Canada Occupational Health and Safety Regulations Part XIX Hazard Prevention Program, and the DFO Occupational Health and Safety Manual.
- It is to assist personnel in identifying foreseeable hazards when *Electrofishing*
- The application of these control measures will assist in preventing occupational accidents.
- This THA is to be reviewed regularly to ensure that all potential hazards have been identified.

Region: Pacific		TASK HAZARD ANALYSIS
Branch/Division: Science		Electrofishing
Last revision: 2016-01-25		Developed by: Jayme Hills, January 2016
Column A - BASIC STEPS	Column B - HAZARDS	Column C – TASK INSTRUCTIONS
	CONSIDER: Health and safety, damage to people, property, equipment or program/the 5 categories of hazards; biological, physical, ergonomic, chemical, and psycho-social.	Define how each step is to be performed safely, ensuring all hazards are addressed.
1. Plan the task	Employee's physical and mental abilities, limitations and medical conditions.  Psycho-social - time constraints, weather constraints, difficult terrain	Obtain necessary permits.  Ensure all persons are mentally and physically prepared and capable of performing the task.  Assess the location; consider weather, terrain, water temperature, water levels, public presence, etc. Discuss potential hazards specific to the location.  Develop a work plan (incl. emergency procedures) and discuss with the crew.  Ensure crew members have current electrofishing certification.  Review other applicable safe work procedures; provincial work safe



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		guidelines; provincial government departments responsible for fisheries/environmental protection.
2. Safety	<p>Physical – sudden changes in weather conditions</p> <p>Physical- working in field environment</p> <p>Physical- working in/around water</p> <p>Physical- working with electric current</p> <p>Physical/ Psycho-social- working near the public</p>	<p>Refer to DFO Policy for the use of Backpack Electrofishing Units.</p> <p>Crew must be two or more certified persons with one certified as a team leader</p> <p>Two persons must have current CPR and First Aid training</p> <p>All personnel must be provided with necessary training and safety equipment, and be aware of potential risks.</p> <p>First Aid kit must be available</p> <p>Emergency response plan must be in place and include emergency phone numbers for the area of operation, best and closest means of communication, evacuation to the nearest medical facility and the role of each team member in an emergency</p> <p>If necessary, take measures to inform/protect the public; have extra person communicating, signage, etc.</p> <p>Extra training maybe be required including: swift water rescue, advanced first aid, bear aware, WHMIS, etc.</p>
3. Equipment Inspection	<p>Physical- injury</p> <p>Damage to equipment</p>	<p>Ensure manufacturer's instructions/ safe work procedures for the equipment are available and that all crew members are familiar with them</p> <p>Complete Electrofishing Checklist</p> <p>Perform pre-use inspection of electrofisher and PPE; check waders and Linesman gloves for holes. Have appropriate non-slip footwear.</p>
4. Electrofishing Operation	<p>Physical – slips and falls, electric shock, fatigue, hypothermia, soft tissue damage, strains, lacerations, drowning, death</p> <p>Physical- injury to public, environment</p>	<p>Identify the Team Leader</p> <p>Complete Electrofishing Field Safety Checklist each day</p> <p>Perform equipment pre-use safety/operational checks per manufacturer instructions</p> <p>Review and perform hand signals with crew</p>



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	<p>Physical- injury to other species</p> <p>Equipment /property damage or loss</p>	<p>Ensure all personnel are clear of the electrodes before turning on the power.</p> <p>All personnel must wear PPE: non slip footwear, leak free chest waders and Linesman gloves, PFD, and have with them a brimmed hat and polarized glasses</p> <p>If any leak in PPE are detected the person must leave the operation and obtain dry leak free equipment before returning.</p> <p>Operate the electrofisher in accordance to the manufacturer's instructions and DFO Interim Policy for the use of Backpack Electrofishing Units.</p> <p>Use the minimum voltage required to obtain desired results to avoid excess harm to other biota.</p> <p>Visually inspect sites for hazards such as submerged logs or conductive materials (culverts, metal fencing), deep holes, etc. before commencing.</p> <p>Operation should cease during inclement weather such as moderate to heavy rain, heavy fog, thunder or lightning.</p> <p>Electrofishing units must be turned off prior to entering or leaving a stream and batteries disconnected when not in use or in transport.</p>
5. Clean up/ Shut down	<p>Equipment damage or loss</p> <p>Physical- damage to the environment, invasive species</p>	<p>Inspect equipment and PPE for damage, report any problems.</p> <p>Clean and dry Linesman gloves.</p> <p>Prevent spread of invasive species; clean and dry waders and footwear. Disinfect footwear if necessary (felt boots; allow to completely dry, freeze at -20 for 24 hour, or soak in water/vinegar bath for 20 minutes)</p> <p>Recharge all batteries as per manufactures instructions</p> <p>Store equipment for transport and storage.</p> <p>Report any injuries, equipment damage or loss using the departmental Hazardous Occurrence Incident Report form.</p>



## Safe Work Procedure

Science

Branch

Pacific

Region

Electrofishing

Subject

### I. PURPOSE

The purpose of this safe work procedure is to provide guidance to Science staff on how to minimize risks to which the staff may be exposed when they are using a electrofishing equipment. This procedure is intended to guide the supervisor's and staff's use of discretion and common sense when making decisions related using portable electrofishers

It is the responsibility of all Branch staff to conduct risk assessments on an ongoing basis to prevent injury to themselves, the public, and other employees.

As per Canada Labour Code Part II, 126. (1), employees shall review and comply with these procedures.

### II. PROCEDURES

#### 1. *Plan the task.*

Obtain necessary permits.

Ensure all persons are mentally and physically prepared and capable of performing the task.

Assess the location; consider weather, terrain, water temperature, water levels, public presence, etc. Discuss potential hazards specific to the location.

Develop a work plan (incl. emergency procedures) and discuss with the crew.

Ensure crew members have current electrofishing certification.

Review other applicable safe work procedures.



### **2. Safety Considerations.**

Refer to DFO Policy for the use of Backpack Electrofishing Units.

Crew must be two or more certified persons with one certified as a team leader

Two persons must have current CPR and First Aid training

All personnel must be provided with necessary training and safety equipment, and be aware of potential risks.

First Aid kit must be available

Emergency response plan must be in place and include emergency phone numbers for the area of operation, best and closest means of communication, evacuation to the nearest medical facility and the role of each team member in an emergency

If necessary take measures to inform/protect the public; have extra person communicating, signage, etc.

Extra training may be required including: swift water rescue, advanced first aid, bear aware, WHMIS, etc.

### **3. Equipment Inspection.**

Ensure manufacturer's instructions/ safe work procedures for the equipment are available and that all crew members are familiar with them

Complete Electrofishing Checklist

Perform pre-use inspection of electrofisher and PPE; check waders and Linesman gloves for holes. Have appropriate non-slip footwear.

### **4. Electrofishing Operation.**

Identify the Team Leader

Complete Electrofishing Field Safety Checklist each day

Perform equipment pre-use safety/operational checks per manufacturer instructions

Review and perform hand signals with crew

Ensure all personnel are clear of the electrodes before turning on the power.

All personnel must wear PPE: non slip footwear, leak free chest waders and Linesman gloves, PFD, and have with them a



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brimmed hat and polarized glasses

If any leak in PPE are detected the person must leave the operation and obtain dry leak free equipment before returning.

Operate the electrofisher in accordance to the manufacturer's instructions and DFO Interim Policy for the use of Backpack Electrofishing Units.

Use the minimum voltage required to obtain desired results to avoid excess harm to other biota.

Visually inspect sites for hazards such as submerged logs or conductive materials (culverts, metal fencing), deep holes, etc. before commencing.

Operation should cease during inclement weather such as moderate to heavy rain, heavy fog, thunder or lightning.

Electrofishing units must be turned off prior to entering or leaving a stream and batteries disconnected when not in use or in transport.

### **5. Cleanup/Shutdown.**

Inspect equipment and PPE for damage, report any problems.

Clean and dry Linesman gloves.

Prevent spread of invasive species; clean and dry waders and footwear. Disinfect footwear if necessary (felt boots; allow to completely dry, freeze at -20 for 24 hour, or soak in water/vinegar bath for 20 minutes)

Recharge all batteries as per manufacturer's instructions

Store equipment for transport and storage.

### **III. TRAINING REQUIREMENTS**

Electrofishing Certification

Standard First Aid with valid CPR level C certification

Other training as required: swift water rescue, bear aware, advanced first aid

### **IV. PERSONAL PROTECTIVE EQUIPMENT REQUIRED**

Non slip footwear



## Safe Work Procedure

Chest waders with wading belt  
Linesman gloves  
Transport Canada approved PFD  
Brimmed hat  
Polarized glasses

### V. REFERENCES

Electrofisher manufacturer's instructions  
Electrofishing certification training guide  
DFO Interim Policy for the use of Backpack Electrofishing Units 2003.  
Provincial Workers Compensation  
Provincial Government fisheries/environmental protection division

### VI. APPROVED BY

Dr. Carmel Lowe, Regional Director, Science Branch

Original prepared by Jayme Hills & Steve Macdonald  
OSH Review by PBS OSH Committee  
V1.0  
OSH Review by PBS OSH Committee Rick Ferguson and Colin Peters  
V2.0 Dec 19, 2019

Original Signed by Dr. Carmel Lowe, RDS

07/07/2016

Signature

Date (mm/dd/yyyy)

**Director:**

Dr. Carmel Lowe

**Branch:**

Science

**Region:**

Pacific



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