

Rescue 3 International Ice Rescue Standard



Copyright 2015
Rescue 3 International
All Rights Reserved

No part of this book may be reprinted, reproduced, or utilized in any form by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage and retrieval system, without permission in writing from the publisher.

Editor: Ron Morrison and Jen Miller

Authors: Ron Morrison, Keith Dudhnath, and Jon Gorman

Front cover: Raven Rescue

Version: 15.2





Rescue 3 contact details

For a list of course providers in your area, please contact the Rescue 3 Office in your region.

Rescue 3 International

11084A Jeff Brian Lane
PO Box 1050
Wilton
California 95693
USA

Tel +1 916 687 6556

Fax +1 888 457 3727

Website www.rescue3.com

Email info@rescue3.com

Rescue 3 Europe Ltd

The Malthouse
Regent Street
Llangollen
Denbighshire
LL20 8HS

Tel +44 (0) 1978 869 069

Website www.rescue3europe.com

Email info@rescue3europe.com

Canada - Raven Rescue

Box 861
Smithers BC V0J 2N0
Canada

Telephone 250 847 2427

Toll Free 800 880 0287

Website www.ravenrescue.com

Email info@ravenrescue.com

Rescue 3 Asia-Pacific

Website www.rescue3asiapacific.com

Email info@rescue3asiapacific.com

Rescue 3 International

Surface Ice Rescue Training Standards

1. Rescue 3 Philosophy of Rescue

- 1.1 Recall the steps required in order to develop competence.
- 1.2 Explain the order of priorities at the scene of an ice rescue.

2. Training Standards

- 2.1 Recognize the different training courses within the Rescue 3 program.
- 2.2 Recall and reinit the role of an individual trained to a given level.
- 2.3 State how the Rescue 3 program fits within national and international standards.
- 2.4 State how the Rescue 3 program fits within Agency policy and agency Standard Operating Guidelines.

3. Best Practice Guidelines for Ice Rescue Operations

- 3.1 Apply the guidelines to produce safe working practice.

4. Risk Management and Rescuer Safety

- 4.1 Recall the steps to perform a risk benefit analysis.
- 4.2 Recall measures to minimize risks to both your rescuers and the organization.

5. Ice Properties, Formation and Types

- 5.1 Recall the factors that affect ice formation and strength.
- 5.2 Recognize the various types of ice and recall their corresponding properties.

6. Ice Hazards

- 6.1 Recognize ice specific hazards that may affect rescuer safety.

7. Basic Swiftwater Hydrology

- 7.1 Identify the effect that volume, gradient and obstacles have on water.
- 7.2 Identify water features, hazards and suitable control measures.
- 7.3 Describe the impact these features would have on an individual's ability to self rescue and perform surface Ice Rescue.
- 7.4 Understand the hazards of moving water and the limitations of basic surface ice rescue techniques.
- 7.5 Describe how hydrology will effect the formation of ice.

8. Personal Protective Equipment

- 8.1 Identify PPE and Equipment used for in-water or on ice operations.
- 8.2 Select appropriate PPE for a technician, performance checks, donning and buddy checks.
- 8.3 Recall post -use care and inspection procedures.

9. Technical and Team Equipment

- 9.1 Select the correct application for technical equipment used in Surface Ice Rescue.
- 9.2 Recall post-use care and inspection procedures for technical and team equipment.

10. Management and Preplanning

- 10.1 List the four components for a generic pre-plan.
- 10.2 Identify sources of information useful for generic and task location specific pre-planning.
- 10.3 Describe key information that should be included in a pre-plan.

11. Incident Size up

- 11.1 List rescue options in order of ascending risk.
- 11.2 Explain the difference between true and conditional rescues.
- 11.3 Relative to the remit of a Technician, select an appropriate plan of action for the personnel and subject present.

12. ICS and Site Control

- 12.1 Perform a risk assessment of the rescue site.
- 12.2 Based on Hazard recognition, apply appropriate control measures.
- 12.3 Apply different roles that may be allocated at a surface ice incident, including pre-positioned personnel.
- 12.4 Collate relevant information in order to deliver structured messages regarding an incident.
- 12.5 Apply a simple structure and centralized command, in order to brief and manage a team.

13. Communications

- 13.1 Using hand signals, be able to communicate the following: ok, help, stop, left, right, need medical assistance.
- 13.2 Using whistle signals, be able to communicate the following: stop, upstream, downstream and emergency.
- 13.3 Identify barriers to communications and limitations of hand and whistle signals.

14. Medical Considerations

- 14.1 Identify the affects of cold water immersion on the body.
- 14.2 Identify signs, symptoms and treatments for mild/severe hypothermia and drowning.
- 14.3 Identify personnel at risk to the previous medical conditions and control measures put in place to minimize this.
- 14.4 Apply techniques that minimize exposure to the water and decontamination procedures post-exposure.

15. Knots, Bends and Hitches

- 15.1 Be able to tie, identify and check the knots that may be required for a surface ice rescue.
- 15.2 Recall factors affecting know choice for surface ice rescue applications.

16. Anchorage Options and Techniques

- 16.1 Be able to select an appropriate single anchor point and create an attachment point using rope and webbing.
- 16.2 How to place and utilize an ice screw as an effective anchor point.

17. Tensioning Systems and Mechanical Advantage

- 17.1 Identify the need for mechanical advantage systems when tensioning or moving loads.
- 17.2 Build and check simple 2:1 and 3:1 systems that can be reset and capture progress.

18. Ice Testing Procedures

- 18.1 Perform an assessment of the ice to determine its thickness and relative strength.
- 18.2 Perform a basic belay technique and line tend for a lead rescuer who is performing ice testing procedures.

19. Walking on Ice

- 19.1 Demonstrate weak ice procedures.
- 19.2 Demonstrate how to retreat back to safe ice.
- 19.3 Demonstrate how to minimize risks associated with walking on ice.
- 19.4 Determine when Ice is safe to walk on.

20. Self Rescue Techniques

- 20.1 Demonstrate the ability to self rescue from a fall through the ice into water.

21. Conditional Rescues

- 21.1 Identify rescue options in order of ascending risk and the limitations of conditional rescues.
- 21.2 Identify, check and prepare suitable equipment for performing a conditional rescue.
- 21.3 Perform conditional rescues in a variety of locations including talk reach and throw.
- 21.4 Assess subject and environment in order to perform conditional rescues.

22. True Rescues (Contact Rescue)

- 22.1 Demonstrate the ability to don an improvised chest harness.
- 22.2 Demonstrate the ability to connect to the integrated harness on an ice rescue suit.
- 22.3 Determine a safe and appropriate line of approach to the subject.
- 22.4 Demonstrate the ability to secure the subject to the rope system with commercially available systems and improvised techniques.
- 22.5 Demonstrate accurate rope management that ensures the rescuer is not impeded and the belay is robust enough to handle the load.
- 22.6 Demonstrate the ability to extricate the subject from the water onto the ice mantle.
- 22.7 Demonstrate the ability to construct a simple mechanical advantage system.
- 22.8 Demonstrate the ability to perform an off ice mantle rescue to a floating subject in non-moving water.

23. Rescue Craft

- 23.1 Recognize the basic features, care and matinee of a given rescue craft.
- 23.2 Demonstrate the ability to prepare the craft for use.
- 23.3 Demonstrate the ability to efficiently move the craft over the ice.
- 23.4 Demonstrate how to efficiently and safely utilize the craft to assist in the extrication and rescue of a subject who is in the water.
- 23.5 Demonstrate the ability to line tend a rescue craft during a surface ice rescue.

24. Animal Rescue Considerations

- 24.1 Identify hazards and control measures associated with animal rescue
- 24.2 Identify extrication and transport considerations for animal rescue

25. Inflated Fire Hose (Optional)

- 25.1 Students should be able to inflate and deflate a section of hose, and identify the hazards of working with compressed air
- 25.2 Perform reach rescues with a fire hose in a flat water environment, identifying the limitations.

26. Ladder Rescue Techniques (Optional)

- 26.1 Perform reach rescues with a fire hose in a flat water environment, identifying the limitations and hazards.

27. Dynamic Ice Swimming and Self Rescue Techniques

- 27.1 Be able to transition between defensive and aggressive swimming positions while in moving water and generate momentum.
- 27.2 Adopt a variety of angles to the current vector depending on task.
- 27.3 Apply swimming techniques and angle control in order to increase or decrease momentum, to enable swimmers to cross flows, negotiate obstacles and self rescue.
- 27.4 Demonstrate the ability to self rescue back onto the ice mantle in a moving water environment.

28. Dynamic Ice Conditional Rescue Considerations

- 28.1 Identify rescue options in order of ascending risk and the limitations of conditional rescues.
- 28.2 Identify, check and prepare suitable equipment for performing a conditional rescue.
- 28.3 Perform conditional rescues in a variety of locations including talk reach and throw.
- 28.4 Assess subject and environment in order to perform conditional rescues.
- 28.5 Recognize the tactical differences between dynamic and static ice rescue techniques.

29. Dynamic Ice True Rescue Considerations

- 29.1 Demonstrate the ability to don an improvised chest harness.
- 29.2 Demonstrate the ability to connect to the integrated harness on an ice rescue suit.
- 29.3 Determine a safe and appropriate line of approach to the subject.
- 29.4 Demonstrate the ability to secure the subject to the rope system with commercially available and improvised techniques.
- 29.5 Demonstrate accurate rope management that ensures the rescuer is not impeded and the belay is robust enough to handle the load.
- 29.6 Demonstrate the ability to extricate the subject from the water onto the ice mantle.
- 29.7 Recognize the tactical differences between dynamic and static ice rescue techniques.

30. Dynamic Ice Mantle-Based Craft Rescue Considerations

- 30.1 Recognize the basic features, care and matinee of a given rescue craft.
- 30.2 Demonstrate the ability to prepare the craft for use.
- 30.3 Demonstrate the ability to efficiently move the craft over the ice.
- 30.4 Demonstrate how to efficiently and safely utilize the craft to assist in the extrication and rescue of a subject who is in the water.
- 30.5 Demonstrate the ability to line tend a rescue board during a surface ice rescue.
- 30.6 Recognize the tactical differences between dynamic and static ice rescue techniques.

31. Dynamic Off Mantle Rescue Techniques - Rescuer Based

- 31.1 Perform a risk benefit analysis to determine whether or not off-mantle ice rescue tactics are feasible.
- 31.2 Demonstrate the ability to safely and efficiently perform an off-mantle contact rescue and gain control of a floating subject and bring them back to the ice mantle.
- 31.3 Function as a line tender during an off-mantle dynamic ice rescue.

32. Dynamic Off Mantle Rescue Techniques - Craft Based

- 32.1 Perform a risk benefit analysis to determine whether or not off mantle ice rescue tactics are feasible.
- 32.2 Demonstrate the ability to disconnect from the tether system and maneuver the craft to pick up the subject.
- 32.3 Demonstrate the ability to maneuver the craft back onto the ice mantle.
- 32.4 Function as a line tender during an off mantle dynamic ice rescue.

33. Containment Strategies for Dynamic Ice

- 33.1 Recognize the need for downstream containment and identify the associated risks.
- 33.2 Demonstrate the ability provide effective downstream containment during dynamic ice rescue operations.

34. Co-Worker Rescue (one person rescue techniques)

- 34.1 Perform a risk benefit analysis to determine which ice rescue tactics are feasible.
- 34.2 Demonstrate the ability to set up a rescue system that allows the rescuer to access and secure a waterborne subject.
- 34.3 Demonstrate the ability to extricate the subject from the water and back to safe ice with only one rescuer.
- 34.4 Demonstrate the ability to construct and utilize a simple mechanical advantage system.

35. Rope Assisted Self Rescue/Belay techniques

- 35.1 Perform a risk benefit analysis to determine when a rope assisted self belay should be utilized.
- 35.2 Set up a rope system which allows the worker to access weak ice and will assist in self rescue should it be required.
- 35.3 Demonstrate the ability to self rescue given a rope system with mechanical advantage.

36. Equipment Recovery Strategies

- 36.1 Perform a risk benefit analysis to determine if equipment recovery is feasible.
- 36.2 Recall the considerations for use of a tripod or artificial high directional to assist with extrication.
- 36.3 Demonstrate the ability to construct a simple mechanical advantage rope system to assist in extricating equipment from below the ice.



11084 Jeff Brian Ln
Wilton, CA 95693
United States

Tel: +1-916-687-6556
Email: info@rescue3.com
Website: www.rescue3.com

 [Facebook.com/Rescue3International](https://www.facebook.com/Rescue3International)