



# Burlington Fire Department

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<b>Section: 04 - Special Operations</b>	
<b>SOG Number: 04.01</b>	<b>Effective Date: 01.17.2020</b>
<b>Subject: Water Rescue</b>	
<b>By Order of Fire Chief Steven A. Locke</b>	

## **I. Purpose:**

The purpose of this document is to provide general guidance for safe and efficient operations at ice and water emergencies. It is understood, especially relative to assigned tasks based on order of dispatch, that there may be the need to deviate from the direction provided within this document. Current response plans include the immediate dispatch of Colchester Technical Rescue. The intent is to minimize the delay in dive resources arriving when operating in a rescue mode.

## **II. Scope:**

This guideline applies to those situations where members of the Burlington Fire Department respond to incidents involving ice and/or water, including circumstances where water temperatures may be greater than 70°F. It does not apply to situations where the water is estimated to be moving at a speed greater than 1 knot (1.15 mph); these situations are addressed within *SOG 04.08: Swiftwater Rescue Response*.

## **III. Definitions:**

Back-Up Rescue Team: Support personnel to the primary rescue team, consisting of two personnel.

Cold Water: Water that is at a temperature of 70 degrees Fahrenheit or lower. Lake Champlain Water temperatures may be found at the National Weather Service website ([www.weather.gov/btv/recreation](http://www.weather.gov/btv/recreation)).

Hasty Kit: The minimum compliment of water rescue equipment carried on each suppression unit, which should include the following:

- (1) Ice Screw
- (1) 300' polypropylene water rescue rope with carabiner
- (1) Horseshoe Rescue Sling
- (2) Sets of Ice Creepers
- (2) 75' Rope Throw Bags
- (2) Personal Floatation Devices (PFDs)

Primary Rescue Team: Rescue team to make initial contact with the victim, consisting of two personnel.

Suppression Unit: Any fire apparatus, such as an engine, ladder, or heavy rescue. Ambulances and Battalion 1 are Not defined as suppression units in the context of CAD and this guideline.

## **IV. Guidelines:**

### **A). RESPONSE**

1. The predetermined response for any water rescue call is as follows:
  - a. (2) Suppression Units (any unit with pump capability, regardless if of the unit type ladder or engine)
  - b. (2) Ambulances – (1) for patient considerations & (1) for deployed personnel.
  - c. Tower 1 (Rescue 1, if Tower 1 is out of service)
  - d. Battalion 1
  - e. Colchester Technical Rescue
2. For incidents that occur on Lake Champlain, dispatch shall provide notification to the local US Coast Guard station.

### **B). GENERAL CONSIDERATIONS**

1. Water Rescue Equipment – Suppression units should utilize their assigned Hasty Kit.
2. Personal Protective Equipment
  - (1) Personal Floatation Devices (PFD) shall be worn by all shore personnel operating at or near the water (within 10'). Approved water rescue helmets should be worn when possible. Non-vented helmets are not permitted.
  - (2) Burlington fire Department members shall not go onto the ice or into cold water without a cold water entry suit. Members trained in swift-water rescue may choose to wear a swift-water rescue suit in place of a traditional cold water entry suit. If members are wearing swift-water rescue suits, they must also wear swift-water PFDs with a dorsal attachment point.

Exception: In situations where a medical or traumatic event has occurred on the ice, and there is no compromise of ice conditions the on-scene incident commander may evaluate the ice conditions in accordance with Appendix A to allow member to access the patient without donning a cold

water entry suit. Regardless of ice conditions, PFDs and water rescue helmets (if available) must be worn.

(3) Structural firefighting gear is not permitted near the water.

(4) It is permissible for members, at the discretion of the RTS or incident commander, to enter water not classified as cold water without a cold water entry suit or swift-water rescue suit. Prior to entry, the water conditions need to be evaluated for obvious contamination; contaminated water requires the use of either a cold water rescue suit or swift-water rescue suit. Regardless, PFDs shall be worn and helmets, if available, should be worn.

3. Rescue 1 intentionally will not be on the initial assignment, unless in service for Tower 1. Members should give consideration to requesting an unassigned unit go to Station 1 and respond with Rescue 1, as there is additional water rescue equipment available on the apparatus. This includes additional personal floatation devices (PFDs), throw bags, ropes, boogie boards, swiftwater suits, and water rescue helmets.

### C). OPERATIONS

1. Mode of Operations: Members must determine whether operations are classified as a rescue or a recovery. Rescue efforts will continue for 60 minutes\* from the time of dispatch, the exception being that during cold water operations, the rescue effort will continue for up to 90 minutes from the time of dispatch.

\*This timeline will vary with patients who were known to have supplemental floatation or wearing PFDs.

2. Size Up Considerations

- a. Determining Last Seen Point (LSP):

(1) Interview witness/survivors separately.

(2) Ask witnesses to describe potential LSP from where they observed incident.

(3) Attempt to create line of site markers using fixed objects.

(4) Consider using rescue swimmer or boat to help witness identify LSP.

(5) Determine number of potential victims.

3. General Operational Considerations

- a. Members of the 1<sup>st</sup> arriving suppression unit should be the primary rescue team. The priority for this team is to reach and support the victim(s) as soon as possible.

- b. Members of the 2<sup>nd</sup> arriving suppression unit should be the back-up rescue team. A primary responsibility as the back-up rescue team is to provide appropriate patient packaging devices (i.e. stokes, SKED, etc.).

- c. The 1<sup>st</sup> arriving ambulance will typically be dedicated to BFD personnel committed to rescue efforts.

- d. The 2<sup>nd</sup> arriving ambulance will be dedicated to patient care for victims.

- e. Members of the 3<sup>rd</sup> arriving suppression unit will report to the incident commander for situation specific assignment. They will likely fulfill shore support roles.
  - f. Consideration should be given to operational flexibility based on the knowledge, skills, and abilities of members present at the incident when it comes to final task assignment.
  - g. Medical treatment for patients who have been rescued will typically be initiated once they have been relocated to on shore.
4. Ice Rescue
- a. Primary rescue team brings hasty kit and makes contact with victim(s).
  - b. Back-up rescue team brings hasty kit and is dressed to make entry should it be necessary. This team is responsible for bringing an appropriate patient packaging device.
  - c. One member of team, the “contact rescuer”, will make victim contact, typically with the use of the horseshoe rescue sling. This member will be tethered, with his or her line being tended by the 2<sup>nd</sup> member of the primary rescue team and/or members of the back-up rescue team. This line, often anchored with an ice screw, will be used to haul the victim and contact rescuer to a safe area.
  - d. Upon making contact, the contact rescuer should ask the victim(s) the following questions and ideally relay this information:
    - (1) Are you alone?
    - (2) How long have you been in the water?
5. Open Water Rescue
- a. Primary rescue team brings hasty kit and makes victim contact.
  - b. Primary rescue team members should be tethered separately to shore.
  - c. One member of the primary rescue team will approach the victim and secure them using the horseshoe rescue sling.
  - d. The back-up rescue team will bring the hasty kit and be prepared to immediately enter the water, if necessary. The back-up team will typically remain on shore to assist or serve as a rescue for the primary rescue team.

#### D). DETERMING WATER VELOCITY

1. Determining the speed of the current will provide a quick reference for potential victim movement, as well as determination of whether the incident is classified as a water rescue or swift-water rescue. Mark off 100' along the shoreline. Throw a buoyant object in and record the time it takes for the object to travel the 100'.

Time (Seconds)	Velocity (Ft/Second)	MPH
5	20.0	13.60
10	10.0	6.8
15	6.7	4.56
20	5.0	3.40
25	4.0	2.72
50	2.0	1.36
100	1.0	0.68

#### V. **Responsibility:**

It is the responsibility of all members to read, understand and follow this Standard Operating Guideline

Revision History			
Revision Date	Section	Summary	Principal Author
A	TBD	TBD	Lt. S. Petit



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## Appendix A

### Remember: NO ICE - IS SAFE ICE

Below are the published guidelines for ice thickness and strength. These are for clear, blue ice on lakes and ponds. There are other factors to take into account long with the Ice Thickness Guidelines:

1. Ice seldom freezes uniformly; ice may be a foot thick in one location and only an inch or two a few feet away.
2. The insulating effect of snow slows down the freezing process. The extra weight of the snow also reduces how much weight the ice sheet can support.
3. The movements of schools of fish can bring warm water up from the bottom of the lake, adversely affecting the safety of the ice. Many lakes and ponds have springs, inlets, outlets, and other types of currents that may create dangerous thin spots.
4. Cattail stands and tree roots near the water's edge can weaken the ice and slow the formation of ice. Avoid these areas when possible (University of Vermont, 2011).



Reference:

University of Vermont. (2011, February). *When is Ice Safe*. Retrieved from [https://www.uvm.edu/sites/default/files/whenIsIceSafe\\_feb2011.pdf](https://www.uvm.edu/sites/default/files/whenIsIceSafe_feb2011.pdf)