

Swiftwater and Flood Rescue Technician Advanced - Water and Rope (SRTA-W&R)

The Swiftwater and Flood Rescue Technician Advanced - Water and Rope course is for existing Rescue 3 Swiftwater and Flood Rescue Technicians looking at advanced rescue situations both in and over water including search management in a swiftwater and flood environment.

Current Rescue 3 Technicians wanting an advanced rescue capability in water can do the SRTA-W. Those wanting to add rope rescue including steep and vertical banks and over water technical rescue capability can do the SRTA-W&R.

Contact hours

30 hours (5 days)

Prerequisites

Swiftwater and Flood Rescue Technician (SRT)

Rope Rescue Operator (RRO)

Minimum age: 18.

Qualification valid for

3 years

Taught by

- Swiftwater and Flood Rescue Technician Advanced (Water and Rope) Instructor (SRTAI)

Assessment

The assessed elements of this course are:

- Foundation knowledge
- Swiftwater swimming techniques
- Throwbags
- Knots and anchor systems
- Tensioning systems and mechanical advantage

Swiftwater and Flood Rescue Technician Advanced - Water and Rope (SRTA-W&R) skill sheet contents

Theory	
1.	Rescue 3 philosophy
2.	Training standards
3.	Risk assessments
4.	Incident size-up
5.	Incident management and site control
6.	Weir risk assessments
7.	Loads and forces
8.	System safety checks

Practical	
9.	Swiftwater swimming techniques
10.	Conditional rescues - talk, reach, throw
11.	True rescues - tethered
12.	Hydraulic/weir rescues
13.	Tethered boats in high energy water
14.	Night/poor visibility operations
15.	Introduction to paddle boat handling on moving water (if used by agency)
16.	Boat unwrapping (if used by agency)
17.	Flips and rights (if used by agency)
18.	Team/personal recovery into boat (if used by agency)
19.	Knots and anchor systems
20.	Belay systems
21.	Tensioning systems and mechanical advantage
22.	Casualty care and packaging
23.	Low angle stretcher attending
24.	High angle stretcher attending
25.	Boat-based stretcher management
26.	In-water stretcher management
27.	Introduction to search management
28.	Search exercises
29.	Personal ascending and descending
30.	Mirrored team-based raising and lowering systems
31.	Passing knots through a system
32.	Highline rope systems
33.	PPE considerations for combined water and rope operations
34.	Rope to water transitions

Swiftwater and Flood Rescue Technician Advanced - Water and Rope (SRTA-W&R) standards

	Skill sheet element		Learning outcome
1	Rescue 3 philosophy	1.1	Recall the steps required in order to develop judgement
		1.2	Explain the order of priorities at a water rescue scene
2	Training standards	2.1	Recognise the different training courses within the Rescue 3 scheme
		2.2	Recall the remit and role of an individual trained to this level
		2.3	State how the Rescue 3 scheme fits within national and international standards
		2.4	State how the Rescue 3 scheme fits within agency policy and agency standard operating guidelines
3	Risk assessments	3.1	Identify the elements of an effective dynamic risk assessment
		3.2	Perform a dynamic risk assessment of a complex rescue site
4	Incident size-up	4.1	Perform an on-site safety brief based on risk assessments
		4.2	Select an appropriate plan of action for a given complex incident
5	Incident management and site control	5.1	Apply different roles that may be allocated at a water incident
		5.2	Collate relevant information in order to deliver structured messages regarding an incident
		5.3	Apply a simple structure and centralised command, in order to brief and manage a team
6	Weir risk assessment	6.1	Identify the key features that can make a hydraulic/weir dangerous, and their impact on both victim and rescuer
		6.2	Perform a Rescue 3 weir risk assessment
		6.3	Relate the Rescue 3 weir risk assessment to rescue options

	Skill sheet element		Learning outcome
7	Loads and forces	7.1	Differentiate between mass and force
		7.2	Identify SI base units and derived units used in rope rescue
		7.3	Describe the differences between static and dynamic forces
		7.4	Recall the permissible maximum arrest force (MAF)
		7.5	Recall the parameters of a worst case event (WCE)
		7.6	Apply the worst case event and maximum arrest force to minimum breaking strength of equipment and system design
		7.7	Calculate the effect of a change of direction on system force
		7.8	Recall appropriate system safety factors
		7.9	Recall the difference between ideal, theoretical and actual mechanical advantage
		7.10	Calculate the ideal mechanical advantage of a system
8	System safety checks	8.1	Identify the components of a system safety check
		8.2	Perform a system safety check
9	Swiftwater swimming techniques	9.1	Select swimming techniques, angle control and momentum to perform a variety of tasks in moving water
10	Conditional rescues - talk, reach, throw	10.1	Work as a team to perform multiple and complex rescues using conditional rescue techniques
11	True rescues - tethered	11.1	Work as a team to perform multiple and complex rescues using true rescue techniques
12	Hydraulic/weir rescues	12.1	Perform rescues from a hydraulic/weir
13	Tethered boats in high energy water	13.1	Identify the limitations of hand-controlled tethers for boats
		13.2	Construct tethered boat solutions that increase the system's ability to deal with force and increase redundancy
		13.3	Build and operate a boat on a highline
		13.4	Compare boat on a highline reeving options and variables that would affect their application
14	Night/poor visibility operations	14.1	Identify hazards associated with night/poor visibility operations, and apply suitable control measures
		14.2	Perform a risk assessment and operate at night/in poor visibility

	Skill sheet element		Learning outcome
15	Introduction to paddle boat handling on moving water (if used by agency)	15.1	Identify agency use or non-use of paddle boats
		15.2	Identify the importance of correct trim and power distribution
		15.3	Be able to paddle forwards, backwards and turn in moving water
		15.4	Apply angle to a current, in order to ferry glide
		15.5	Recognise the importance of applying angle before momentum
		15.6	Apply simple command within the boat, in order to achieve simple objectives in moving water
		15.7	Break in and break out of the flow in a paddle boat
16	Boat unwrapping (if used by agency)	16.1	Identify methods to minimise the likelihood of a wrapped boat
		16.2	Identify how the movement of weight may help to unbalance a wrapped boat
		16.3	Recall the application of rope systems for evacuating a wrapped boat, and unwrapping
17	Flips and rights (if used by agency)	17.1	Identify steps to minimise the likelihood of a flip occurring
		17.2	Recall the sequence once a boat has flipped
		17.3	Explain options for whether to re-flip, and variables that would affect this choice
		17.4	Perform a re-flip and recovery
18	Team/personal recovery into boat (if used by agency)	18.1	Identify reasoning behind team/self-rescue ability into boat
		18.2	Perform team-based rescue (or self-rescue) over sponson whilst in deep water
		18.3	Perform recovery, starting from all crew members in deep water
19	Knots and anchor systems	19.1	Identify, tie and check appropriate knots for swiftwater rescue
		19.2	Recall factors affecting knot choice for swiftwater rescue applications
		19.3	Select appropriate anchor points and/or systems for task
20	Belay systems	20.1	Select an appropriate belay method for task
21	Tensioning systems and mechanical advantage	21.1	Select, build and check appropriate mechanical advantage systems for use within advanced swiftwater rescue
22	Casualty care and packaging	22.1	Identify medical issues that may require casualties to be transported by stretcher

	Skill sheet element		Learning outcome
23	Low angle stretcher attending	23.1	Employ techniques to protect personnel when moving a stretcher over rough or steep terrain
24	High angle stretcher attending	24.1	Identify hazards and control measures associated with high angle litter management
		24.2	Participate in a variety of high angle litter management techniques relative to the remit of someone trained to this level.
25	Boat-based stretcher management	25.1	Identify when to use a stretcher in a boat
		25.2	Identify the different types of stretcher used for boat-based transport
		25.3	Identify risks of strapping a casualty into stretcher/boat
		25.4	Identify best placement and securing of stretcher within different boat types
		25.5	Perform loading and transferring of a stretcher from shallow and deep water into rescue boat
26	In-water stretcher management	26.1	Identify when to utilise a stretcher in a water environment
		26.2	Identify risks of strapping a casualty into stretcher to be transported in a water environment
		26.3	Compare techniques for moving stretchers around in the water
27	Introduction to search management	27.1	Demonstrate use of appropriate search models
		27.2	Collate information gathered in the primary phase of a water search
		27.3	Calculate a search area based on a given scenario
		27.4	Assign tasks to individuals during a river-based search
		27.5	Assign tasks to individuals during a flood-based search
28	Search exercises	28.1	Perform a primary search
		28.2	Segment a search area, based on information gathered
		28.3	Redeploy to perform a secondary search
29	Personal ascending and descending	29.1	Identify hazards and control measures associated with ascending and descending
		29.2	Demonstrate personal ascending in a variety of twin line systems
		29.3	Demonstrate personal descending in a variety of twin line systems

	Skill sheet element		Learning outcome
30	Mirrored team-based raising and lowering systems	30.1	Explain the importance of working with twin lines
		30.2	Identify when team rope-based raising and lowering systems would be used, their merits and limitations
		30.3	Identify the importance of using an auto-locking lowering device with team rope-based raising and lowering systems
		30.4	Rig and check team rope-based raising and lowering systems
		30.5	Convert a lowering system to a raising system whilst unloaded
		30.6	Convert a lowering system to a raising system whilst loaded
		30.7	Identify the advantages of a dual capable two tension rope system (DCTTRS) over 'designated main, designated belay'.
		30.8	Rig, check and use a dual capable two tension rope system (DCTTRS)
31	Passing knots through a system	31.1	Identify when a knot would be passed through a system, its merits and limitations
		31.2	Pass knots through systems
32	Highline rope systems	32.1	Identify when highline systems would be used, their hazards and control measures
		32.2	Identify when a Kootenay highline would be used, its merits and limitations
		32.3	Rig, check and use a Kootenay highline
		32.4	Identify when an English reeve would be used in a highline, its merits and limitations
		32.5	Rig, check and use a highline with an English reeve
		32.6	Compare the merits and limitations of highlines with an English reeve and a Norwegian reeve
		32.7	Identify when a Norwegian reeve would be used in a highline, its merits and limitations
		32.8	Rig, check and use a highline with a Norwegian reeve
		32.9	Identify when multiple track lines would be used in a highline system, their merits and limitations
		32.10	Rig, check and use a highline system with multiple track lines
33	PPE considerations for combined water and rope operations	33.1	Identify PPE for combined water and rope operations.

	Skill sheet element		Learning outcome
34	Rope to water transitions	34.1	Identify the implications of coming off a rope system, into water.
		34.2	Perform a rope to water transition