



## Level 3: River Safety and Rescue Cross-Over ICE for L4: WWK / L4: WWC Instructors

**Overview:** Fundamentally, we expect that participants should have the paddling skills, technical knowledge, rescue ability, teaching ability, group management, and interpersonal skills commensurate with this level of certification prior to presenting themselves for evaluation as Instructor Candidates at an Instructor Certification Exam (ICE).

### **Essential Eligibility Criteria (EEC):**

ACA courses are open to all individuals who acknowledge the ability to perform the following essential eligibility criteria.

1. Breathe independently (i.e., not require medical devices to sustain breathing)
2. Independently maintain sealed airway passages while under water
3. Independently hold head upright without neck / head support
4. Manage personal care independently or with assistance of a companion
5. Manage personal mobility independently or with a reasonable amount of assistance
6. Follow instructions and effectively communicate independently or with assistance of a companion
7. Independently turn from face-down to face-up and remain floating face up while wearing a properly fitted life jacket\*
8. Get on / off or in / out of a paddlecraft independently or with a reasonable amount of assistance\*
9. Independently get out and from under a capsized paddlecraft\*
10. Remount or reenter the paddlecraft following deep water capsize independently or with a reasonable amount of assistance\*
11. Maintain a safe body position while attempting skills, activities and rescues listed in the appropriate Course Outline, and have the ability to recognize and identify to others when such efforts would be unsafe given your personal situation\*

*\* To participate in adaptive programs, participants must acknowledge only the first six EEC listed above. Entry-level adaptive programs will involve teaching and practicing EEC #7-11.*

**Course Prerequisites:** Current ACA Instructor Certification at Level 4: Whitewater Canoe or Level 4: Whitewater Kayaking (minimum)

**Course Duration:** ICE (1 Day Minimum – 8 Hours)

**Course Location / Venue:** A deep chute of water with well-defined eddy lines and no immediate hazards or risks below. The site may include moving water, class I rapids, and class II rapids. Protected space is needed for on-land work, with adequate shelter for inclement weather.



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**Boat/ Personal Equipment:** Properly outfitted canoe or kayak appropriate for venue. PFD designed for whitewater use, whitewater helmet, protective clothing suitable for extended swimming in cold water, protective footwear, boat, paddle, whistle and throw rope.

**Class Ratio:** 12 Instructor Candidates: 1 Instructor Trainer; with an additional instructor the ratio can be 24 : 2

**Succeeding Levels of Certification:**

Level 4: Swiftwater Rescue

Level 5: Advanced Swiftwater Rescue

The following is a sample ICE specifically designed to allow currently certified L4: WWC / L4:WWK Instructors to be certified at L3: RSR.

**General Requirements for all Instructor Certifications:**

- Be at least 18 years old
- Meet the appropriate essential eligibility criteria
- Successfully complete an Instructor Certification Workshop (IDW & ICE)
- Be a full ACA member
- Upon successful completion, register with the Safety Education & Instruction Council
- Have and maintain First Aid and age appropriate CPR
- Demonstrate a general knowledge of paddlesports and the ACA
- Demonstrate the ability to appropriately perform and teach all of the following material unassisted in the appropriate venue

**Maintenance Requirements:**

- Teach at least two courses that meet ACA standards within the four-year certification period and report the results to the National Office
- Complete an Instructor Update, at the highest level of certification, during the four-year certification period
- Maintain ACA membership and SEIC registration annually

**Introduction**

- Introductions and expectations
- Class overview – review of ICE requirements and process
- Waivers and medical forms
- Safety plan- Site logistics

**Rescue Philosophy**

- Accident avoidance and proactive rescue
  - accident timeline
  - prevention and “what if...?” strategy
  - prior planning for accident management
- Priorities



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## Cross-Over ICE for

### L4: WWK / L4: WWC Instructors

- me, my group, bystanders, the victim
- simple and fast to complex and slow
- Liability and Ethical issues
- Trip Organization
- Trip planning principles
- Emergency action plan
  - lead and sweep
  - know the group, the river and the weather
  - plan the trip and communicate the plan

#### **Scene Management**

- Locate, access and assess, stabilize and transport
- Prioritizing the rescue
- Most rescues performed quickly, without a formal structure
- Larger groups and longer rescues often need more structure
- Incident Command structure
  - leader
  - safety
  - rescuer
- Complete the rescue without compounding the situation
- Communication (AW signals)
  - hand and whistle signals
  - cell phone or radio if appropriate

#### **Medical Issues**

- NOT a first aid class; perform medical care to your level of training
- Don't make the situation worse
- Obtain more training; calling 911 is rarely an effective option
- Rescuers should be familiar with common medical problems including hypothermia, drowning, cuts and scrapes, and dislocations/broken bones.
- CPR and wilderness first aid skills are essential for rescuers

#### **Equipment**

- Protection from rocks and water
  - shoes, helmet, PFD
- Thermal protection
  - wet suit vs. dry suit, wool vs. synthetics, avoid cotton in cold/wet conditions
- Personal rescue gear
  - boat, paddle, whistle, throw rope, knife, saw, first aid kit, rescue PFD
- Group rescue gear
  - specific needs depend on the river paddled and local weather
- Survival equipment
  - specific needs depend on the river paddled and local weather

#### **Throw Ropes**



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- Selection based on rope material, diameter, and length
- Advantages and disadvantages of traditional bags, waist bags, coiled lines
- Care of the rescue rope
  - avoid sun exposure, keep clean, avoid stepping on the line, avoid sharp or rough edges
  - when in doubt, replace the line
- Rope safety
  - avoid standing over lines, avoid tensioning lines perpendicular to current, keep your body out of loops in the line, consider clean line techniques, keep entire rope in bag to avoid accidental deployments
- Throwing and recovery zones
  - consider where the victim will land, don't make their situation worse
- Types of throws
  - over-arm (football and arc), underarm, side-arm
  - deploying less than full length for close targets
- Factors impacting an accurate throw
  - rope length and diameter, brush and trees, footing, distance to target, cold hands, practice
- Receiving the rope
  - hold over your shoulder, with hands on your chest and elbows tucked into stomach
  - rope should sit on the shoulder opposite the target shore (to set ferry angle)
- Belay techniques
  - hip belay, sitting, buddy, dynamic, tree
  - line on downstream side
- Coiling and re-throwing
- Vector pull to assist landing
- Stuffing techniques
- Multiple swimmers
- Figure 8 knot and figure 8 on a bight

#### **Water Hazards and Hydrology**

- Rivers are powerful, predictable and persistent
- Subjective vs. objective hazards
  - poor judgment can be fatal
  - river hazards don't care if you don't recognize them
  - flooding dramatically increases risk
- Water reading (upstream and downstream Vs)
- Eddies and eddy lines
- Waves
- Hydraulics
- Strainers
- Horizon lines
- Undercut rocks, broaching rocks
- Foot entrapment risks

#### **Swimming**



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- Essential self-rescue tool
- Safe eddy rule, don't try to stand in swift current
- Defensive and aggressive swimming & breathing techniques
- Defensive to aggressive transitions
- Conserving energy
- Crossing eddy lines
- Ferry techniques
- Swiftwater entries
  - modified belly flop; head and feet up, impact on the PFD
  - set ferry angle
  - protect face with crossed arms
- Swimming with gear
- Handling strainers, holes and drops (discussion)

#### **Wading**

- Safe eddy rule
- Swim instead of fighting for marginal footing
- Water depth, water speed, and bottom conditions affect performance
- Maintain balance
- "Look with your toes"
- One person with paddle/prop
- Two person

#### **Boat-based rescue**

- Often fastest and easiest technique for boaters, but potentially high risk
- Many uses for boats
- Ferries for people and equipment
- Tool to sprint for help
- Paddle recovery
  - throw, two paddles in hand, put in your boat
- Boat recovery
  - bulldozer or shove
  - set a ferry angle
- Self-rescue
  - hold boat and paddle in one hand when swimming with gear
  - set a ferry angle
  - boat stays downstream of victim
- Swimmer rescues and assists
  - assisting victims back into boats
  - strengths and limitations of canoes, kayaks and rafts
  - stern and bow tows

#### **Pins**

- Avoid getting pinned or entrapped by recognizing hazards
- Pin mechanics



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- balance between gravity, friction, and force of water
- Types of pins
  - vertical, center broach, end to end, pinch pin
- Release by unbalancing forces
- Tag line on boat for recovery after release
  - consider what happens when the boat releases
- Stabilization line to support trapped victim
- Self-rescue
  - avoidance, high side to avoid inverting, wiggle off the rock, bail out
- If all participants are safe, waiting for low water may be a viable option

### **Entrapment**

- High risk; hands-on rescue places rescuers near the entrapping object
- Avoid by hazard recognition and appropriate swimming techniques
- Most commonly foot entrapments, strainers, or trapped in a boat
- Keep victim heads up with stabilization line
- Snag line to release foot entrapments

### **Scenarios**

- Managing common river problems, including multiple swimmers and loose gear
- Debriefing to reinforce rescue priorities

### **Individual conferences**

- instructor candidate evaluations (time will vary depending on number of candidates and other variables)*L-*

### ***3 RSR Instructor Performance Objectives***

**Venue:** RSR instructor courses are taught on class II rapids.

**Prerequisite:** Current Level 4: Whitewater Kayaking or Level 4: Whitewater Canoeing instructor certification

### ***Course Objectives:***

- Promote proactive prevention of river accidents and injuries.
- Develop and practice key self-rescue skills.
- Identify and avoid river hazards by understanding hydrology, hazards, and river features.
- Focus on fast, low-risk strategies for early management of river accidents
- Practice methods for recovering swimmers, and loose boats and equipment

### ***General Instructor Objectives:***

- Focus on course objectives above and overall participant safety



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- Effectively and accurately demonstrate and teach all skills addressed in the skills course. Demonstrate an in-depth knowledge of all topics
- Use a wide a variety of teaching styles and techniques in response to participant needs and logistic constraints. Demonstrate an effective knowledge of learning styles.
- Develop a “critical eye” to help identify and solve common participant errors
- Develop multiple techniques to help correct participant errors/inefficiencies
- Manage each course module and the overall course according to ACA instructional best practices, and with strong attention to site- and course-specific logistics.
- Choose appropriate sites for courses and specific drills.

#### ***Course Specific Instructor Objectives:***

##### **Class Management**

- Collect and administer all appropriate course paperwork
- Establish an appropriate learning environment

##### **Rescue Philosophy**

- Focus on prevention and preparation as the keys to managing river accidents
- Establish rescue priorities and apply them throughout the course
- Focus on simpler, safer, faster techniques as highest priority

##### **Scene Management**

- Describe common roles in the incident command system (ICS). Understand the differences between formal (ICS) used by professional rescuers and the informal system used by recreational boaters.
- Appropriately apply formal and informal incident command systems to course evolutions and scenarios
- Establish / review appropriate communication techniques

##### **Medical Issues**

- Appropriately manage medical events during courses
- Encourage participants to further their medical training
- Understand how to obtain more advanced medical and rescue care at the teaching site, and recognize challenges associated with medical care in remote / aquatic environments.

##### **Equipment**

- Focus on how to choose appropriate gear, instead of focusing on what the instructor personally prefers
- Emphasize prior planning and practice when using rescue equipment
- Understand the strengths and limitations of personal gear and rescue equipment

##### **Throw Ropes**

- Discuss rope construction and characteristics desired in a river rescue rope
- Discuss and demonstrate appropriate rope care
- Explain advantages and disadvantages of all throwing techniques
- Discuss and demonstrate appropriate belay techniques





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- Discuss and demonstrate proper rope receiving techniques
- Discuss and demonstrate multiple techniques for re-stuffing bags
- Discuss and demonstrate multiple techniques for recoiling ropes
- Demonstrate a vector pull and discuss its applications to rope rescue
- Consistently throw a bag at least 30 feet to a swimmer in a rapid, using multiple techniques, including a coil.
- Coil and make a second accurate throw, to a victim in a rapid at least 25 feet away, within 30 seconds.
- Consistently throw a bag at least 30 feet and cross a stationary, on-land, 4 foot wide target, using multiple techniques, including a coil

#### **Water Hazards and Hydrology**

- Create effective teaching modules using blackboards, handouts, sand tables, video, etc., as well as using natural features while alongside a river
- Appropriately apply hydrology to site selection and to all in-water modules

#### **Swimming**

- Choose appropriate swimming venues, with lower risk to students
- Discuss and demonstrate appropriate techniques for entering rivers
- Discuss and demonstrate defensive and aggressive swimming techniques
- Effectively and repeatedly peel out, catch eddies and ferry. Effectively swim through waves and hydraulics
- Aggressively swim a downstream class I or higher whitewater course at least 75 yards long, with multiple ferries and eddy moves
- Discuss appropriate techniques for managing strainer, holes and drops

#### **Wading**

- Discuss and demonstrate multiple wading techniques
- Choose appropriate techniques for application in other skill modules
- Discuss and demonstrate practical applications of wading solo with a paddle and wading with a partner

#### **Boat-based rescue**

- Paddle candidate's craft of choice effectively and comfortably in class I+ whitewater
- Demonstrate a working knowledge of all types of boat-based rescue, for all paddle craft
- Emphasize the importance of paddling skill for effective boat-based rescues
- Discuss the rationale for boat-based rescue over potentially lower risk techniques

#### **Pins**

- Focus on avoiding pins and early self-rescue
- Understand rescuer hazards associated with pin release
- Focus on rescue priorities – people over equipment
- Use multiple techniques to effectively release pinned craft and equipment

#### **Entrapments**

- Focus on avoiding entrapments and maintaining rescue safety





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- Identify common causes of entrapment
- Use appropriate skills to contact the victim and release the entrapment
- Discuss and demonstrate use of stabilization and snag lines

### **Scenarios**

- Create scenarios appropriate for specific sites and participants
- Effectively manage scenarios
- Provide effective feedback to scenario participants
- Effectively participate in appropriately challenging scenarios

### **Closing**

- Guide participants to appropriate further training opportunities
- Emphasize the need for ongoing practice and education