



# Level 2: Essentials of River Safety and Rescue

(Sample Skills Course)

**Course Overview:** **Essentials of River Safety and Rescue** workshop teaches recognition and avoidance of common river hazards, execution of self-rescue techniques, and simple rescues of paddlers in distress. Emphasis is placed both on personal safety and on simple, commonly used skills. Fundamental techniques for dealing with hazards that carry greater risks for both victim and rescuer, such as entrapments, and pins, also are taught. This course is aimed primarily at new boaters, or boaters who anticipate paddling in moving water but not whitewater.

## 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

## 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:** All paddle craft are welcome. Boaters should be able to competently maneuver their craft in moving water. However, all boaters, and non-boaters with an interest in swiftwater rescue (e.g., professional rescuers), will benefit from the class. Participants should be in good health and overall fitness, possess solid swimming ability, and be comfortable swimming in moving current during river drills. Participants should dress appropriately for weather and temperature and expect to be in the water for extended periods of time.

**Minimum personal equipment for class:** PFD designed for whitewater use, whitewater helmet, protective clothing suitable for extended swimming in cold water, protective footwear, boat, paddle, whistle and throw rope.

**Course Duration:** One or more days (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 and class I rapids. Protected space is needed for on-land work, with adequate shelter for inclement weather.

**Succeeding courses:**



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Level 3: River Safety and Rescue  
Level 4: Swiftwater Rescue  
Level 5: Advanced Swiftwater Rescue

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

The following is a general summary of course content for the Level 2: **Essentials River Safety and Rescue** course. Safety and Rescue Instructors should use this document as a general guide for conducting programs. Depending on the program, specific content points might be studied and practiced in depth, briefly reviewed, or skipped entirely. Specific program content should be adjusted as necessary to accommodate student skills, goals and experience, as well as weather and water conditions during the program.

**Definitions of key terms and skills can be found in the [ACA River Safety & Rescue Terminology Handbook](#).**

## **Introduction, Expectations, & Logistics:**

- Welcome, introductions, paperwork
- Student & instructor course expectations and limitations
- Course itinerary & site logistics
- Review waiver, assumption of risk, challenge by choice, medical disclosure
- About the ACA
- PFD policy (always wear on water)
- Appropriate personal behavior
- No alcohol / substance use
- Proper etiquette on & off the water

## **Personal Preparation:**

- Personal ability
- Swimming ability
- Water comfort & confidence
- Fitness, conditioning, and warm up
- Safe paddle and boat handling
- Safety and rescue considerations
- Personal equipment (reviewed by Instructor)

## **The Paddling Environment**

- Weather conditions and forecasts
- International scale of river difficulty
- Characteristics of current
- River levels and streamflow (CFS)
- Subjective vs. objective hazards
- Effective river/rapid scouting strategies
- River features & hazards:
  - Downstream and Upstream V's/chutes
  - Eddies and Eddy Lines
  - Waves/Wave Holes
  - Holes/Hydraulics

## **The Paddling Environment (continued)**

- Ledges / Horizon lines



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- Strainers: types, typical locations
- Rocks/Pillows
- Cold water immersion/response
- Dams / Flow Diversion Structures / Pipelines
- Undercut Rocks / Ice
- Flush drowning

## Personal Paddling Equipment (PPE)

- Helmet
- PFD
- Footwear
- Craft & Paddle
- Thermal Protection
- Accessories: Knife, whistle, food, etc.
- Craft specific PPE (i.e. SUP leashes)

## Personal Rescue Equipment (PRE)

- Tubular webbing
- Locking carabiners
- Throw Rope

## Rescue Strategy

- Personal Preparation: Swimming ability, Confidence, Fitness & Conditioning
- Strategies to prevent or minimize incidents
- Trip organization and planning principles: Float plans, emergency action plans
- Communication: Hand/paddle and whistle signals
- C.L.A.P. - Communication, Line of Sight, Avoidance, Position of Maximum Usefulness
- Incident Timeline
- Rescue Priorities
- Responsibilities of swimmer/subject
- Phases of rescue:
  - S.T.O.P - Stop, Think, Observe, Plan
  - L.A.S.T - Location, Assess/Access, Stabilize, Transport
- Rescue Management: Leadership, Safety, Rescuers, Subject (stable & unstable)
- Establishing Acceptable Level of Risk: Can I [do this]? Should I [do this]?
- Liability Issues: duty to act, breach of duty, harm, standard of care, abandonment
- Ethical Issues: moral vs. legal obligations
- Medical Issues & Considerations
- Importance of Fitness & Conditioning
- Rescue strategies for common river scenarios:
  - Swimmer with/without equipment in current
  - Paddlers & equipment on mid-stream rocks
  - Boat pins with/without paddler
  - Entrapment

## Wading Skills

- Causes and prevention of foot entrapment
- Formal vs. informal wading techniques

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- Factors that affect success in wading: depth, force, composition of river bottom, number of waders, etc.
- Strengths, limitations, advantages, disadvantages, and risks of wading techniques
- Four-point Crawl
- Single Person Assisted Wade
- Two-Person Wade
- Wading Applications for foot/boat entrapments

## Throw Rope Skills

- Characteristics of throw ropes: rope diameter, length, construction material, and bag design
- Rope management & safety strategies
- Rope care
- Rope hazards
- Throwing and recovery zones
- Factors impacting throw accuracy and success: stationary and moving targets
- Single person throw rope techniques: underhand, overhand, and sidarm
- Bag re-stuffing techniques
- Advantages and disadvantages: bag and coil throwing techniques
- Rope coiling methods and throw techniques: butterfly and coil
- Rope receiving techniques
- Communication with swimmers
- Techniques for handling multiple swimmers
- Vectors pull to assist with landing swimmers
- Belay techniques:
  - Hip belay, seated belay, and back-up belay
  - Dynamic and friction belay
- Pendulum use for crossing current

## Swimming Skills

- Strategies to minimize risk of foot entrapment
- Techniques for successful exits from current to eddys
- Defensive swimming position
- Aggressive swimming position
- Defensive to aggressive transitions
- Ferry techniques: defensive and aggressive swimming
- Self-Rescue: swimming with equipment
- Swimming techniques for: waves, hydraulics, and drops
- Strategies to conserve energy: short aggressive sprints, “porpoising” for in-water scouting, appropriate timing, etc.
- Managing holes and drops
- Swiftwater entries: in and out-of-water starting position
- Techniques for successful downstream swim of a rapid

## Rigging Skills

- Knots: components of good knots, dressing, terminology, strengths, and limitations
- Tie and properly dress:
  - Figure 8 Family: standard, on bight, follow-through



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- Overhand Family for webbing: Overhand on a bight, overhand bend

## Craft Pins

- Pin mechanics
- Types of craft pins
- Boat-based techniques for pins
- Control & Haul Lines
- Strong Arm Method

## Craft-based Rescues

- Advantages and disadvantages during rescues of various crafts: canoe, kayak, SUP, raft, prone kayak, river boards
- Paddle recovery options
- Strategies for boat recovery
- Self-Rescue: swimming with equipment
- Swimmer tow options
- Swimmer re-entry/re-mount techniques
- Craft bumping/bulldozing
- Craft towing (without use of Quick Release Rescue Harness and tether)
- Craft specific rescues
- Unresponsive Paddler Rescue

## Scenarios

- Simulated rescue skill sessions and scenarios will be used throughout the course to:
  - Model and utilize effective risk management and rescue strategies
  - Highlight essential skills for the course level and venue
  - Increase skill and experience level of students
  - Maximize learning outcomes for all students

## Conclusion & Wrap-Up:

- Group debrief / Individual feedback
- Course limitations
- Importance of First Aid/CPR and Wilderness First Aid
- Importance of additional instruction, practice, experience
- Life sport / Paddling options
- Local paddling groups / Clubs
- Handouts / Reference materials
- ACA Membership forms
- Course evaluation
- Participation cards