

**20.2.5\*** Perform a nonentry rescue in an ice rescue environment, given an incident scenario, PPE, an ice rescue tool kit, and waterborne transportation aid, so that rescue is accomplished and adopted policies and safety procedures are followed.

**(A) Requisite Knowledge.** Types and capabilities of PPE, effects of hydrodynamic forces on rescuers and victims, physiological effects of immersion and cold water near-drowning, hydrology and characteristics of water/ice, behaviors of victims, water rescue rope-handling techniques, incident-specific hazard identification, criteria for selecting victim retrieval locations based on environmental conditions, hazards, and information on local water environments.

**(B) Requisite Skills.** The ability to select PPE specific to the ice rescue environment, don and use PPE, identify water hazards (e.g., upstream or downstream, current or tide), identify hazards directly related to the specific rescue, and demonstrate appropriate shore-based victim removal techniques.

**20.2.6\*** Terminate an incident, given PPE specific to the incident, isolation barriers, and a tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modifications or damage created during the operational period; documentation of loss or material use is accounted for; scene documentation is performed and scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing, postincident analysis, and critique are considered; and command is terminated.

**(A) Requisite Knowledge.** PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.

**Δ (B) Requisite Skills.** Select and use task and hazard-specific PPE; decontaminate PPE; use barrier protection techniques, data collection, and record-keeping/reporting protocols; and participate in postincident analysis activities.

**20.3 Technician Level.** The job performance requirements defined in Section 20.2 and 20.3.1 through 20.3.2 shall be met prior to or during technician-level qualification in ice rescue.

**20.3.1** Demonstrate techniques for movement on ice, given an ice formation that is representative of the bodies of water and ice existing or anticipated within the geographic confines of the AHJ, ice rescue PPE, and swim aids as required, so that the specified objective is reached, all performance parameters are achieved, movement is controlled, hazards are continually assessed, distress signals are communicated, and rapid intervention for the rescuer has been staged for deployment.

**(A) Requisite Knowledge.** Hydrology and specific hazards anticipated for representative ice rescue environments (shoreline, in-water, and climatic), selection criteria for ice rescue PPE and swim aids for anticipated water conditions and hazards, and swimming techniques for representative body of water.

**(B) Requisite Skills.** The ability to swim and float in different water conditions with and without flotation aids or swim aids as required, apply water survival skills, self-rescue with and without use of grip aids in the event of breakthrough, don and doff PPE, select and use swim aids, utilize communications systems,

use task-specific equipment, and evaluate water/ice conditions to identify entry points and hazards.

**20.3.2** Perform an entry rescue in the ice rescue environment, given an incident scenario, PPE, and ice rescue tool kit, so that independent positive buoyancy is established for the victim, rescue is accomplished, and adopted policies and safety procedures are followed.

**(A) Requisite Knowledge.** Types and capabilities of PPE, effects of hydrodynamic forces on rescuers and victims, hydrology and characteristics of water, behaviors of victims, physiological effects of immersion and cold water near-drowning, water rescue rope-handling techniques, incident-specific hazard identification, criteria for selecting victim retrieval locations based on water environment and conditions, hazards and limitations of entry rescue, local policies/procedures for rescue team activation, and information on local water environments.

**(B) Requisite Skills.** The ability to select PPE specific to the water/ice environment, don PPE, identify water/ice hazards (i.e., upstream or downstream, current or tides), identify hazards directly related to the specific rescue, and demonstrate appropriate victim removal techniques.

## Chapter 21 Surf Rescue

**21.1 Awareness Level.** Prior to qualification at the awareness level in surf rescue, the individual shall meet the requirements defined in Section 21.1.

**N 21.1.1** Size up a surf rescue incident, given background information and applicable reference materials, so that the scope of the rescue is determined, the number of victims is identified, the last reported location of all the victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained.

**N (A) Requisite Knowledge.** Types of reference materials and their uses, availability and capability of the resources, elements of an incident action plan and related information, relationship of the size-up to the incident management system, information gathering techniques and how that information is used in the size-up process, and basic search criteria for surf rescue incidents.

**N (B) Requisite Skills.** The ability to read technical rescue reference materials, gather information, use interview techniques, relay information, and use information-gathering sources.

**N 21.1.2** Recognize incident hazards and initiate isolation procedures, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified; resource application fits the operational requirements; hazard isolation is considered; risks to rescuers, bystanders, and victims are minimized; and rescue time constraints are taken into account.

**N (A) Requisite Knowledge.** Resource capabilities and limitations; types and nature of incident hazards; equipment types and their use; isolation terminology, methods, equipment, and implementation; operational requirement concerns; common types of rescuer and victim risks; risk/benefit analysis methods and practices; hazard recognition, isolation methods, and

terminology; methods for controlling access to the scene; and types of technical references.

**(B) Requisite Skills.** The ability to identify resource capabilities and limitations, identify incident hazards, assess potential hazards to rescuers and bystanders, place scene control barriers, and operate control and mitigation equipment.

**21.1.3** Recognize the need for technical rescue resources at an operations- or technician-level incident, given AHJ guidelines, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.

**(A) Requisite Knowledge.** Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.

**(B) Requisite Skills.** The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.

**21.1.4** Support an operations- or technician-level incident, given an incident, an assignment, an incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.

**(A) Requisite Knowledge.** AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, and scene support requirements.

**(B) Requisite Skills.** The ability to apply operational protocols, function within an incident management system, follow and implement an incident action plan, and report the task progress status to a supervisor or incident command.

**21.2 Operations Level.** The job performance requirements defined in Sections 21.1 and 21.2 shall be met prior to or during operations-level qualification in surf rescue.

**21.2.1** Develop a site survey for an existing surf site, given historical data, PPE for conducting site inspections, rescue equipment for effecting surf rescues, tide tables, currents, and wave heights and meteorological projections, so that life safety hazards are anticipated, risk/benefit analyses are included, site inspections are completed, ocean conditions are projected, site-specific hazards are identified, routes of access and egress are identified, boat ramps are identified, access and egress points to surf sites are identified, methods of entrapment are considered, and areas with high probability for victim location are determined.

**(A) Requisite Knowledge.** Contents of a site survey; types, sources, and information provided by reference materials; hydrology and influence of hydrology on rescues; types of hazards associated with ocean rescue practice scenarios, inspection practices, and consideration techniques; risk/benefit analyses; identification of PPE; identification of rescue equipment for effecting surf rescues; factors influencing access and egress routes; behavioral patterns of victims; and environmental conditions that influence victim location.

**(B) Requisite Skills.** The ability to interpret reference materials, perform a scene assessment, evaluate site conditions, complete risk/benefit analyses, select and use necessary PPE, and select and use appropriate rescue equipment for effecting surf rescues.

**21.2.2\*** Demonstrate survival swimming skills in low-surf environment, given safety equipment and a water body with low surf, so that basic survival skills are demonstrated in a representative environment as found in the jurisdiction, performance parameters are achieved, and problems can be identified prior to working in a low-surf environment.

**(A) Requisite Knowledge.** Types of fundamental swimming skills to enter a surf zone, maneuver within the surf zone, and exit the surf zone, and fundamental surf knowledge that includes knowing how waves form, why waves are seasonal, how to judge wave heights, recognizing the difference between plunging and spilling waves, knowing the dynamics of surf-related currents such as long-shore and riparian (or rip) currents, and familiarity with the user groups in the surf zone and the types of equipment they use.

**(B) Requisite Skills.** The ability to perform fundamental swimming skills in a surf zone, including the ability to enter, maneuver in, and exit the surf zone; swim in different surf conditions with and without flotation aids or swim aids; apply water survival skills; complete a distance swim in any open body of water using any stroke and without the aid of any surf rescue equipment; identify different types of waves, different types of currents, and the user groups in the surf zone and the types of equipment they use.

**21.2.3\*** Deploy a nonmotorized watercraft and rescue a water-bound surf victim, given watercraft used by the AHJ, so that watercraft predeployment checks are completed, watercraft launch or recovery is achieved as stipulated by AHJ operational protocols, both onboard and surf rescue operations conform with watercraft operational protocols and capabilities, communications are clear and concise, and the candidate is familiar with watercraft nomenclature, operational protocols, design limitations, and launch/recovery site issues.

**(A) Requisite Knowledge.** Types of fundamental skills to enter a surf zone, maneuver within the surf zone, and exit the surf zone on a nonmotorized watercraft; fundamental surf knowledge that includes knowing how waves form, why waves are seasonal, how to judge wave heights, recognizing the difference between plunging and spilling waves, knowing the dynamics of surf-related currents such as longshore and rip currents, and familiarity with the user groups in the surf zone and the types of equipment they use; and victim retrieval and removal techniques.

**(B) Requisite Skills.** The ability to perform fundamental deployment and maneuvering skills in a surf zone on a nonmotorized watercraft, including the ability to enter, maneuver in, and exit the surf zone; perform in different surf conditions; negotiate a measured distance in any open body of water using the watercraft used by the AHJ; identify different types of waves, different types of currents, and the user groups in the surf zone and the types of equipment they use; and maneuver in the surf zone after retrieving a victim and demonstrate appropriate victim removal techniques.

**21.2.4\*** Define procedures to provide support for surf rescue operations within the area of responsibility for the AHJ, given

motorized watercraft used by the AHJ, protocols and procedures, boat-to-shore communication, extraction issues, and safety procedures, so that communications are clear and concise, and the candidate is familiar with boat nomenclature, operational protocols, and design limitations.

**(A) Requisite Knowledge.** Limitations and uses of available boats, dynamics of moving water and its effects on boat handling, launch and docking procedures, conditional requirements for PPE, applications for motorized and appropriate boats, operating hazards as related to conditions, and crew assignments and duties.

**(B) Requisite Skills.** The ability to ride the boat, evaluate conditions for launch, don water rescue PPE, utilize communications systems, and apply procedures for rescuing a victim in the surf zone, including assisting the victim into the boat.

**21.2.5\*** Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for; scene documentation is performed, scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered, and command is terminated.

**(A) Requisite Knowledge.** PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, postincident analysis techniques.

**Δ (B) Requisite Skills.** Selection and use of hazard-specific PPE, decontamination, use of barrier protection techniques, data collection and record-keeping/reporting protocols, postincident analysis activities.

**Δ 21.3 Technician Level.** The job performance requirements defined in Sections 21.2 and 21.3 shall be met prior to or during technician-level qualification in surf rescue.

**21.3.1** Demonstrate advanced swimming skills in the surf environment, given safety equipment and a water body with high surf, so that advanced skills are demonstrated in an environment representative of conditions experienced in the jurisdiction, performance parameters and objectives are achieved, and problems can be identified prior to working in a high surf environment.

**(A) Requisite Knowledge.** Types of fundamental swimming skills to enter, maneuver, and exit a surf zone; wave formation theory; wave types; dynamics of surf-related currents such as longshore and rip currents; and familiarity with victim behavior and recreational equipment used.

**(B) Requisite Skills.** The ability to perform advanced swimming skills in the surf zone, including the ability to enter, maneuver in, and exit the surf zone; swim in different surf conditions with and without flotation aids or swim aids; apply water survival skills; complete a distance swim in any open body of water using any stroke without the aid of any surf rescue equipment; and identify wave types, current types, and potential victim behavior.

**21.3.2** Perform a swimming rescue for a water-bound surf victim, given PPE, including a pair of swimming fins and a rescue flotation device, safety equipment, and a water body

with high surf representative of the jurisdiction's conditions, so that the victim is secured within the surf rescue tube and towed out of the surf impact zone to shore or to a surf-free zone for pickup by a watercraft, boat, or helicopter.

**(A) Requisite Knowledge.** Types of fundamental swimming skills to enter, maneuver, and exit a surf zone; wave formation theory; wave types; dynamics of surf-related currents such as longshore and rip currents; and familiarity with victim behavior and recreational equipment used.

**(B) Requisite Skills.** The ability to perform advanced swimming skills in the surf zone, including the ability to enter, maneuver in, and exit the surf zone; swim in different surf conditions with and without flotation aids or swim aids; apply water survival skills; complete a distance swim in any open body of water using any stroke without the aid of any surf rescue equipment; identify wave types, current types, and potential victim behavior; and maneuver in the surf zone with a surf rescue tube, tow a victim with the tube, and demonstrate victim removal techniques.

**21.3.3** Perform a subsurface retrieval of a submerged victim in a surf environment, given PPE, including swimming fins, dive mask, and snorkel, and a water body with high surf representative of the jurisdiction's conditions, so that the victim is located and brought to the surface, removed out of the surf impact zone to shore or to a surf-free zone for pickup by a watercraft, boat, or helicopter.

**(A) Requisite Knowledge.** Types of fundamental swimming skills to enter, maneuver, and exit a surf zone; wave formation theory; wave types; dynamics of surf-related currents such as longshore and rip currents; and familiarity with victim behavior and recreational equipment used.

**(B) Requisite Skills.** The ability to perform free diving skills in the surf zone, including the ability to enter, maneuver in, and exit the surf zone while towing a victim; swim in different surf conditions with and without flotation aids or swim aids; apply water survival skills; complete a distance swim in any open body of water using any stroke without the aid of any surf rescue equipment; identify wave types, current types, and potential victim behavior; and maneuver in the surf zone with a rescue flotation device, tow a victim with the tube, and demonstrate victim removal techniques.

## Chapter 22 Watercraft Rescue

**22.1\* Awareness Level.** Prior to qualification at the awareness level in watercraft rescue, the individual shall meet the requirements defined in Section 22.1.

**22.1.1** Initiate a discipline-specific search, given hazard-specific PPE, equipment pertinent to the search mission, an incident location, and victim investigative information, so that search parameters are established, the victim profile is established, the access and egress of all people either involved in the search or already within the search area are questioned and the information is updated and relayed to command; the personnel assignments match their expertise, all victims are located as quickly as possible, applicable technical rescue concerns are managed, risks to searchers are minimized, and all searchers are accounted for.

**(A) Requisite Knowledge.** Local policies and procedures and how to operate in the site-specific search environment.



**(B) Requisite Skills.** The ability to enter, maneuver in, and exit the search environment and provide for and perform self-escape and self-rescue.

**22.1.2\*** Perform ground support operations for helicopter activities, given a rescue scenario/incident, helicopter, operational plans, PPE, requisite equipment, and available specialized resources, so that rescue personnel are aware of the operational characteristics of the aircraft and demonstrate operational proficiency in establishing and securing landing zones and communicating with aircraft personnel until the assignment is complete.

**(A) Requisite Knowledge.** Ground support operations relating to helicopter use and deployment, operation plans for helicopter service activities, type-specific PPE, aircraft familiarization and hazard areas specific to helicopters, scene control and landing zone requirements, aircraft safety systems, and communications protocols.

**(B) Requisite Skills.** The ability to provide ground support operations, review standard operating procedures for helicopter operations, use PPE, establish and control landing zones, and communicate with aircrews.

**22.1.3** Select hazard-specific PPE, given PPE, including personal flotation devices (PFDs), helmets, and exposure garments that are consistent with the needs of the incident and type of watercraft, so that the wearer is protected from the effects of accidental immersion, exposure to the elements, and injury from unanticipated movement of the watercraft.

**(A) Requisite Knowledge.** Hazards present on and near the water and aboard watercraft used by the AHJ including those presented by weather, current, water conditions, and the capacities.

**(B) Requisite Skills.** Ability to locate, identify, and don PPE and flotation devices.

**22.1.4** Maintain watercraft stability, given a selected watercraft used by the AHJ, so that the stability of the craft is not compromised, the possibility of a fall is minimized, and the rescuer is protected from harm.

**(A) Requisite Knowledge.** Elements that affect the stability of watercraft, including mass, center of gravity, weight distribution, impact loads, current, sail area, and wind and water conditions.

**(B) Requisite Skills.** Boarding and exiting a watercraft in a manner that prevents injury and minimizes the impact on the stability of the watercraft.

**22.1.5** Size up a watercraft rescue incident, given background information and applicable reference materials, so that the scope of the rescue is determined, the number of victims is identified, the last reported location of all the victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained.

**(A) Requisite Knowledge.** Types of reference materials and their uses, availability and capability of the resources, elements of an incident action plan and related information, relationship of the size-up to the incident management system, information gathering techniques and how that information is used

in the size-up process, and basic search criteria for watercraft rescue incidents.

**(B) Requisite Skills.** The ability to read technical rescue reference materials, gather information, use interview techniques, relay information, and use information-gathering sources.

**22.1.6** Recognize incident hazards and initiate isolation procedures, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified; resource application fits the operational requirements; hazard isolation is considered; risks to rescuers, bystanders, and victims are minimized; and rescue time constraints are taken into account.

**(A) Requisite Knowledge.** Resource capabilities and limitations; types and nature of incident hazards; equipment types and their use; isolation terminology, methods, equipment, and implementation; operational requirement concerns; common types of rescuer and victim risks; risk/benefit analysis methods and practices; hazard recognition, isolation methods, and terminology; methods for controlling access to the scene; and types of technical references.

**(B) Requisite Skills.** The ability to identify resource capabilities and limitations, identify incident hazards, assess potential hazards to rescuers and bystanders, place scene control barriers, and operate control and mitigation equipment.

**22.1.7** Recognize the need for technical rescue resources at an operations- or technician-level incident, given AHJ guidelines, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.

**(A) Requisite Knowledge.** Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.

**(B) Requisite Skills.** The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.

**22.1.8** Support an operations- or technician-level incident, given an incident, an assignment, an incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.

**(A) Requisite Knowledge.** AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, and scene support requirements.

**(B) Requisite Skills.** The ability to apply operational protocols, function within an incident management system, follow and implement an incident action plan, and report the task progress status to a supervisor or incident command.

**22.2\* Operations Level.** The job performance requirements defined in Sections 22.1 and 22.2 shall be met prior to or during operations-level qualification in watercraft rescue.

**22.2.1** Identify the types of watercraft, given a list of watercraft used by the organization, so that their limitations, capabilities,

load ratings, performance criteria, and considerations for their deployment and recovery in the intended environment are identified.

**(A) Requisite Knowledge.** Types of watercraft used by the organization and the qualities and attributes of each craft that affect how it is utilized in the intended environment; inherent conditions of the intended environment including wind, current, and water conditions that affect vessel selection and use; mission scope and tactical objectives that affect watercraft selection.

**(B) Requisite Skills.** Identify watercraft characteristics such as draft, sail area, method of propulsion, size, weight, method of deployment, and configuration that affect its selection for use in a specific environment for a specific mission.

**22.2.2** Identify the configuration of watercraft given a watercraft available to the agency so that the location of access and egress points, propulsion system components, steering controls, communication equipment, emergency equipment, through hull and deck fittings, portals, and fittings necessary for water- and weathertight integrity are located.

**(A) Requisite Knowledge.** Location of equipment, watercraft components, and configuration of watercraft.

**(B) Requisite Skills.** Identify fittings, portals, and other equipment.

**22.2.3** Use the available methods of communicating between the watercraft and other rescuers in the water, on shore, in other watercraft, and in aircraft as applicable given communication tools, so that routine mission-related information and emergency messages are communicated to the intended recipient.

**(A) Requisite Knowledge.** Methods of communication available to rescuer and their limitations given specific weather conditions, visibility, and distances from the intended recipient.

**(B) Requisite Skills.** Select utilize available communication tools such as radios, hand signals, lights, audible signals, and loud hailer for the specific environment to communicate information.

**22.2.4** Identify conditions that require the notification of local and federal authorities, given conditions that require their involvement, including vessels in distress, hazards to navigation, release of hazardous or toxic substances, and other conditions that affect the health and safety of those in and around navigable waters, so that the proper agency is notified and relevant information is communicated.

**(A) Requisite Knowledge.** Laws, regulations, and standards the identify conditions that require notification of outside agencies, the method of notification, and required other actions.

**(B) Requisite Skills.** Identification of specific conditions that require notification of outside agencies and perform methods for their notification.

**22.2.5** Interpret navigational aids given marine lights, structures and markings on land, other vessels, or on the water, so that nautical landmarks and other vessels are identified, intended course is selected, and collisions are avoided.

**(A) Requisite Knowledge.** Appearance and color of visual aids and navigation markers and their meaning.

**(B) Requisite Skills.** Interpret markers, lights, and signals to determine a course that will avoid other vessels.

**22.2.6** Perform self-rescue and survival swimming skills so that flotation is maintained, body heat is conserved, and egress is accomplished.

**(A) Requisite Knowledge.** Effects of hypothermia and cold water immersion and survival skills.

**(B) Requisite Skills.** Performing techniques to float and move through the water to reach a point of egress or await rescue while conserving body heat.

**Δ 22.2.7** Use of hazard-specific PPE, given a watercraft rescue incident/scenario, so that the PPE is used in accordance with AHJ policies relative to the specific incident/scenario, PPE emergency escape procedures are followed, and distress signals are communicated.

**(A) Requisite Knowledge.** The capabilities and limitations of hazard-specific PPE and personal flotation devices, distress signals, emergency escape procedures, and preoperational checklists for the PPE.

**(B) Requisite Skills.** Ability to don and doff PPE and personal flotation devices, including water rescue helmets and water insulating garments; communicate distress signals; follow emergency escape procedures for the PPE; use preoperational checklists for the PPE.

**22.2.8** Navigate a watercraft as a helmsman given a watercraft, navigation tools, and a plotted course, so that the course is followed, obstacles and other vessels are avoided, wind and currents accounted for, awareness of position is maintained, and the destination is reached.

**(A) Requisite Knowledge.** Operation of the controls relevant to the watercraft and how they affect speed and direction of the vessel; how the associated navigational tools, such as compass and GPS devices, function and are interpreted; marking on charts or plotters and their meanings; and the effects of local water, wind, and weather conditions on the direction and speed of the watercraft.

**(B) Requisite Skills.** Operate the controls of the watercraft and use the navigational tools and indicators on the watercraft, and select a heading and speed for the vessel for the existing conditions so that it follows its intended course.

**22.2.9** Perform docking or watercraft recovery operations given a watercraft and an operator so that communication is maintained with the operator; current and wind are accounted for mooring lines and fenders are rigged, the dock or slip and watercraft are protected from impacts, and the vessel is positioned properly at the slip and secured from unintended movement.

**(A) Requisite Knowledge.** Methods for securing a watercraft and rigging fenders to prevent damage and minimize undesired movement of the watercraft; means of maneuvering a watercraft using lines or other external systems to position the watercraft as desired; how wind, weather, and water conditions affect watercraft movement as it approaches the slip and after being secured; and considerations for specialized tools or conveyances used to recover watercraft such as trailers, jet docks, and davits.

**(B) Requisite Skills.** Rigging lines and tying knots, bends, and hitches related to mooring; securing and maneuvering vessels into or at a moorage location or conveyance; predicting direction and speed of approach to a moorage conveyance based on the boat operator actions; and the effects of wind, weather, and wave actions.

▲ **22.2.10** Launch a watercraft from a pier, dock, slip, trailer, or other conveyance, given a watercraft and an operator, so that communication is maintained with the operator, current and wind are accounted for, mooring lines are managed, and equipment is secured against unintended movement.

**(A) Requisite Knowledge.** Methods for launching or deploying a watercraft and rigging, and securing equipment to prevent damage and minimize undesired movement of the watercraft; means of maneuvering a watercraft using lines or other external systems to position the watercraft as desired; how wind, weather, and water conditions affect watercraft movement as it leaves the slip and after being deployed; and considerations for specialized tools or conveyances used to deploy watercraft such as trailers, jet docks, and davits.

**(B) Requisite Skills.** Rigging lines and tying knots, bends, and hitches related to mooring and maneuvering vessels into or at a moorage location or conveyance; predicting direction and speed of vessel departing from a moorage or conveyance based on the boat operator actions; and the effects of wind, weather, and wave action.

**22.2.11** Perform anchoring operations given a watercraft, an operator, and anchoring equipment, so that the anchor is deployed to prevent vessel movement; and anchor swing, weather, and current and tide change is accounted for.

**(A) Requisite Knowledge.** Techniques for setting anchor, requirements for anchor size, line length for the vessel and weather conditions, and the effects of vessel movement while at anchor.

**(B) Requisite Skills.** Set an anchor to minimize the potential for drag, and pay out anchor line to ensure proper scope is achieved for weather and tide changes.

**22.2.12** Perform procedures for a crew overboard (COB) event so that the incident is communicated to the operator, visual location of the subject is maintained, the location is marked, and recovery of the subject is accomplished.

**(A) Requisite Knowledge.** Vessel procedures for man overboard, methods of communication of COB event to operator, crew tactics for marking location to assist with returning to location of event, and effects of immersion and hypothermia.

**(B) Requisite Skills.** Deploy a surface marker or utilize other methods for marking the location of the COB event, deploy flotation aid to the member, perform operations specific to maneuvering the vessel and preparing to recover the subject, and perform recovery operations.

**22.2.13** Perform procedures for launching and recovery of in-water rescuers given a watercraft available to the agency, in-water rescuers and a watercraft operator so that the watercraft is not broached, control of the watercraft is maintained so that the rescuers are deployed and recovered at the designated location and are protected from injury.

**(A) Requisite Knowledge.** Watercraft specific procedures for deploying and recovering rescuers, including methods for

avoiding contact with propulsion elements of the watercraft and uncontrolled falls or potential for entanglement on entry or exit.

**(B) Requisite Skills.** Rig or configure elements of the watercraft required for launching or recovery of rescuers, manage the operation of propulsion systems and other mechanical elements of the watercraft, and coordinate vessel movement and location so the rescuers are deployed and recovered at the desired location.

**22.2.14** Perform a watercraft-based rescue of an incapacitated water bound victim given a watercraft that is available to the team, a water rescue tool kit, a means of securement, and water rescue PPE, so that the watercraft is not broached; control of the watercraft is maintained; risks to the victim and rescuers are minimized; and the victim is removed from the hazard.

**(A) Requisite Knowledge.** Watercraft-specific procedures for recovering victims, including methods for avoiding contact with propulsion elements of the watercraft and uncontrolled falls or potential for entanglement on recovery.

**(B) Requisite Skills.** Rig or configure elements of the watercraft required for recovery of a victim, manage the operation of propulsion systems and other mechanical elements of the watercraft, and coordinate vessel movement and location so the victim is recovered at the desired location.

**22.2.15** Perform procedures to take another watercraft under tow so that the relative sizes of both watercraft are considered; neither vessel is broached; wind, weather, and water conditions are accounted for; lines are connected between the vessels; maneuverability and control are maintained; and the watercraft is protected from damage.

**(A) Requisite Knowledge.** Watercraft-specific procedures for taking a vehicle under tow, including rigging methods, anchor locations, methods for chafe and impact protection; watercraft handling dynamics while towing; propulsion capacities and impact of wind, weather, and water conditions on combined mass and surface area of both vessels; limitations on size and weight of vessel being towed.

**(B) Requisite Skills.** Rig lines; impact and chafe protection; control movement and direction of watercraft under tow; monitor position and condition of vessel under tow; and communicate with watercraft operator to maneuver the watercraft.

**22.2.16** Perform emergency procedures for a watercraft, given a watercraft available to the agency and emergency equipment so that help is summoned, emergency actions are taken, and risks to the occupants of the vessel are minimized.

**(A) Requisite Knowledge.** Location of emergency equipment such as signaling devices, fire extinguishers, distress beacons, life rafts, PFDs, exposure suits, and other related equipment and how to operate and deploy them.

**(B) Requisite Skills.** Deploy and activate life safety and emergency equipment.

**22.2.17** Conduct dewatering operations, given a watercraft available to the jurisdiction and dewatering equipment so that undesired water is reduced or eliminated in the watercraft, vessel stability is maintained, and damage to the watercraft is prevented.



**(A) Requisite Knowledge.** Watercraft specific dewatering plan, operation of onboard dewatering equipment, and effects of excessive water on stability and seaworthiness of the watercraft.

**(B) Requisite Skills.** Operate onboard dewatering equipment to remove water from the vessel.

**22.2.18\*** Terminate an incident, given PPE specific to the incident, isolation barriers, and tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; the party responsible is notified of any modification or damage created during the operational period; documentation of loss or material use is accounted for; scene documentation is performed, and scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing and postincident analysis and critique are considered; and command is terminated.

**(A) Requisite Knowledge.** PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.

**Δ (B) Requisite Skills.** Ability to select and use of hazard-specific PPE; decontamination of PPE; use barrier protection techniques, data collection, and record-keeping/reporting protocols; and postincident analysis activities.

**Δ 22.3\* Technician Level.** The job performance requirements defined in Sections 22.2 and 22.3 shall be met prior to or during technician-level qualification in watercraft rescue.

**22.3.1** Prepare a watercraft to get underway, given a watercraft available to the agency so that preoperational checks are performed, systems are energized, propulsion systems started, functional checks are conducted, and the watercraft is ready to be deployed.

**(A) Requisite Knowledge.** Watercraft system operational procedures and readiness checks.

**(B) Requisite Skills.** Check proper fluid levels, charges, connections, and lubrication of systems and connections.

**22.3.2** Operate a watercraft to perform tasks typical of the mission defined by the AHJ in conditions representative of the waters and weather common to the jurisdiction, given a watercraft available to the agency so that the objectives are achieved, the occupants and crew are protected from harm, and damage to the watercraft is prevented.

**(A) Requisite Knowledge.** Vessel-specific policies and procedures for operating the watercraft; capabilities and limitations of the watercraft; common wind, weather, and water conditions for the jurisdiction.

**(B) Requisite Skills.** Operate the controls of the watercraft and maneuver to achieve the objective while preventing damage to the watercraft or other vessels.

**22.3.3** Plot a course given navigational tools and charts so that heading, speed, and course are determined and wind, weather, current, and water conditions are taken into account.

**(A) Requisite Knowledge.** How to operate conventional and electronic navigation tools used by the agency.

**(B) Requisite Skills.** Determine location, heading, and speed to achieve the desired course.

**22.3.4** Operate the watercraft while performing docking or watercraft recovery operations, given a watercraft and watercraft crewmember(s) so that communication is maintained with the crew, current and wind are accounted for, and the vessel is positioned properly at the slip and secured from unintended movement.

**(A) Requisite Knowledge.** Methods for maneuvering or approaching moorage; how wind, weather, and water conditions affect watercraft movement as it approaches the slip and after being secured; and considerations for specialized tools or conveyances used to recover watercraft such as trailers, jet docks, and davits.

**(B) Requisite Skills.** Control and maneuver vessel into or at a moorage location or conveyance, predicting direction and speed of approach to a moorage conveyance based on the boat operator actions and the effect of wind, weather, and wave actions.

**22.3.5** Operate a watercraft as it is launched or deployed from a pier, dock, slip, trailer, or other conveyance, given a watercraft and watercraft crewmember(s) so that communication is maintained with the crew, current and wind are accounted for, and damage to the watercraft is prevented.

**(A) Requisite Knowledge.** Methods for maneuvering and operating the watercraft while launching or deploying a watercraft so it is positioned as desired, how wind, weather, and water conditions affect watercraft movement as it leaves the slip and after being deployed; and considerations for specialized tools or conveyances used to deploy watercraft such as trailers, jet docks, and davits.

**(B) Requisite Skills.** Maneuvering while departing the moorage location, predicting direction and speed of departure from a moorage or conveyance based on conditions, the characteristics of the watercraft, and the effect of wind weather and wave action.

**22.3.6** Operate a watercraft to conduct anchoring operations, given a watercraft, watercraft crewmember(s), and anchoring equipment so that the anchor is deployed to prevent vessel movement; and anchor swing, weather, current, and tide change are accounted for.

**(A) Requisite Knowledge.** Techniques for setting anchor, requirements for anchor size and line length for the vessel, weather conditions, and the impact of vessel movement while at anchor.

**(B) Requisite Skills.** Set an anchor to minimize the potential for drag, and pay out anchor line to ensure proper scope is achieved for weather and tide changes.

**22.3.7** Operate a watercraft in response to a COB event, given a watercraft available to the agency and watercraft crewmember(s) so that the incident is communicated to the operator, visual location of the subject is maintained, the location is marked, and recovery of the subject is accomplished.

**(A) Requisite Knowledge.** Vessel procedures for man overboard, methods of communication of COB event to the crew and tactics for noting COB locations to assist with returning to location of event, methods of quickly maneuvering the watercraft back to the COB location.

**(B) Requisite Skills.** Note location of the COB event using traditional or electronic methods, maneuvering the vessel to

return to the COB location, and approaching the target area to recover the subject.

**22.3.8** Operate a watercraft to deploy and recover **in-water** rescuers, given a watercraft available to the agency, **in-water** rescuers and watercraft crewmember(s) so that the watercraft is not broached; control of the watercraft is maintained so that the rescuers are deployed and recovered at the designated location and are protected from injury.

**(A) Requisite Knowledge.** Watercraft-specific procedures for deploying and recovering rescuers, including methods for avoiding contact with propulsion elements of the watercraft and uncontrolled falls or potential for entanglement on entry or exit.

**(B) Requisite Skills.** Maneuver and control a watercraft, manage the operation of propulsion systems and other mechanical elements of the watercraft, coordinate vessel movement and location so the rescuers are deployed and recovered at the desired location.

**22.3.9** Operate a watercraft to perform a rescue of an incapacitated **water-bound** victim, given a watercraft that is available to the team, a water rescue tool kit, watercraft crew member(s), a means of securement, and water rescue PPE, so that the watercraft is not broached; control of the watercraft is maintained; risks to the victim and rescuers are minimized; and the victim is removed from the hazard.

**(A) Requisite Knowledge.** Watercraft-specific procedures for recovering victims, including methods for approach, avoiding contact with propulsion elements of the watercraft, and communication methods with crew.

**(B) Requisite Skills.** Maneuver watercraft while approaching **water-bound** victim, manage the operation of propulsion systems and other mechanical elements of the watercraft, coordinate vessel movement and location so the victim is recovered at the desired location.

**22.3.10** Operate a watercraft with another watercraft under tow, given a watercraft available to the agency and water rescue crewmember(s) so that the relative sizes of both watercraft are considered; neither vessel is broached; wind, weather, and water conditions are accounted for; lines are connected between the vessels; maneuverability and control are maintained; and the watercraft is protected from damage.

**(A) Requisite Knowledge.** Watercraft-specific procedures for taking a vehicle under tow; watercraft handling dynamics while towing; propulsion capacities and impact of wind, weather, and water conditions on combined mass and surface area of both vessels; limitations on size and weight of vessel being towed.

**(B) Requisite Skills.** Control movement and direction of the watercraft and the watercraft under tow, monitor position and condition of vessel under tow, and communicate with crewmembers to maneuver the watercraft.

**22.3.11** Operate ancillary navigation and electronic systems given a watercraft available to the agency so that the objective is achieved and the desired information is obtained.

**(A) Requisite Knowledge.** Watercraft- and agency-specific procedures for the use of radar, plotters, and visual aids.

**(B) Requisite Skills.** Operate equipment specific to the watercraft and the agency such as radar, plotters, and forward looking infrared radar (FLIR).

**Δ 22.3.12** Shut down a watercraft, given a watercraft available to the agency, so that **postshutdown** checks are conducted, and the craft is **secured and protected** from damage and tampering.

**(A) Requisite Knowledge.** Agency-specific procedures for watercraft operations; shutdown procedures for propulsion and ancillary systems; methods of securing craft from unwanted movement, theft, and vandalism; connecting and ensuring shore systems are operational.

**(B) Requisite Skills.** Tie knots, bends, and hitches required to moor or secure craft for long-term storage; use conveyances such as trailers, davits, or jet docks that the agency might use for storing or securing the craft; activate or operate systems that control or maintain the environment inside the craft, such as climate control and bilge monitoring systems; and connect and verify operation of shore support systems such as ac power.

## Chapter 23 Floodwater Rescue

**23.1 Awareness Level.** Prior to qualification at the awareness level in floodwater rescue, the individual shall meet the requirements defined in Section 23.1.

**23.1.1** Size up a floodwater rescue incident, given an incident, background information, and applicable reference materials, so that the operational mode is defined; resource availability, response times, and types of rescues are determined; the number of victims is identified; the last reported locations of all the victims is established; witnesses and reporting parties are identified and interviewed; resource needs are assessed; search parameters are identified; and information required to develop an incident action plan is obtained.

**(A) Requisite Knowledge.** Types of reference materials and their uses, risk/benefit assessment, availability and capability of the resources, elements of an action plan and related information, relationship of the size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process and basic search criteria for floodwater rescue incidents.

**(B) Requisite Skills.** The ability to read specific rescue reference materials, interview people, gather information, relay information, manage witnesses, and use information sources.

**N 23.1.2** Recognize incident hazards and initiate isolation procedures, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified; resource application fits the operational requirements; hazard isolation is considered; risks to rescuers, bystanders, and victims are minimized; and rescue time constraints are taken into account.

**N (A) Requisite Knowledge.** Resource capabilities and limitations; types and nature of incident hazards; equipment types and their use; isolation terminology, methods, equipment and implementation; operational requirement concerns; common types of rescuer and victim risks; risk/benefit analysis methods and practices; hazard recognition, isolation methods, and terminology; methods for controlling access to the scene; and types of technical references.



**(B) Requisite Skills.** The ability to identify resource capabilities and limitations, identify incident hazards, assess potential hazards to rescuers and bystanders, place scene control barriers, and operate control and mitigation equipment.

**23.1.3** Recognize the need for technical rescue resources at an operations- or technician-level incident, given AHJ guidelines, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.

**(A) Requisite Knowledge.** Operational protocols, specific planning forms, types of incidents common to the AHJ, hazards, incident support operations and resources, and safety measures.

**(B) Requisite Skills.** The ability to apply operational protocols, select specific planning forms based on the types of incidents, identify and evaluate various types of hazards within the AHJ, request support and resources, and determine the required safety measures.

**23.1.4** Support an operations- or technician-level incident, given an incident, an assignment, an incident action plan, and resources from the tool kit, so that the assignment is carried out, progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.

**(A) Requisite Knowledge.** AHJ operational protocols, hazard recognition, incident management, PPE selection, resource selection and use, and scene support requirements.

**(B) Requisite Skills.** The ability to apply operational protocols, function within an incident management system, follow and implement an incident action plan, and report the task progress status to a supervisor or incident command.

**23.2\* Operations Level.** The job performance requirements defined in Sections 17.2, 18.2, 23.1, and 23.2 shall be met prior to or during operations-level qualification in floodwater rescue.

**23.2.1** Support technician-level floodwater rescue operations, given a designated mission, safety equipment, props, and water body, so that skills are demonstrated in a controlled environment, performance parameters are achieved, hazards are continually assessed, and emergency procedures are demonstrated.

**(A) Requisite Knowledge.** Support procedures, including search patterns, equipment setup, operating support equipment, and communications systems.

**(B) Requisite Skills.** Basic support skills, including the ability to serve as a safety or spotter and tend an in-water rescuer.

**23.2.2\*** Assess floodwater conditions, characteristics, and features in terms of hazards to the rescuer and victims, given an incident scenario and a floodwater tool kit, so that flow and conditions are estimated, depth and surrounding terrain are evaluated, and findings are documented.

**(A) Requisite Knowledge.** Flow calculation methods, characteristics of floodwater events, map reading, interpreting local terrain data, local water hazards and conditions, entrapment mechanisms, weather forecasts, human physiology and survival factors.

**(B) Requisite Skills.** Assessment of water flow and environmental factors, the ability to acquire and interpret weather forecasts and local terrain data, and evaluate their impact on victims and rescuers.

**23.2.3** Perform a nonentry rescue in the floodwater environment, given an incident scenario, PPE, and a floodwater rescue tool kit, so that rescue is accomplished, and adopted policies and safety procedures are followed.

**(A) Requisite Knowledge.** Types and capabilities of PPE, effects of hydrodynamic forces on rescuers and victims, hydrology and characteristics of water, behaviors of water-bound victims, water rescue rope-handling techniques, incident-specific hazard identification, criteria for selecting victim retrieval locations based on water environment and conditions, hazards and limitations of shore-based rescue, local policies/procedures for rescue team activation, and information on local water environments.

**(B) Requisite Skills.** Select PPE specific to the water environment, don PPE, identify water hazards (i.e., upstream or downstream, current or tides), identify hazards directly related to the specific rescue, and demonstrate appropriate shore-based victim removal techniques.

**23.2.4** Implement an incident action plan, as a member of a team, for the use of watercraft to support floodwater search and rescue operations, given an incident action plan and defined resources, so that operational objectives are achieved.

**(A) Requisite Knowledge.** Incident management techniques, entry and exit procedures, communications techniques, boat operation techniques, design limitations, climatic conditions, characteristics of floodwater events, and specific hazards presented by floodwater events in the potential rescue environment.

**(B) Requisite Skills.** Implement access and egress procedures and communication with watercraft crew, use emergency/safety equipment, identify hazards, and operate within the rescue environment.

**23.2.5** Implement an action plan for the use of air assets to support floodwater search and rescue operations, given an action plan, access to air assets, policies, and procedures used by the AHJ, so that floodwater-specific hazards are addressed; rescuers are deployed and recovered as required; both onboard and rescue operations conform with aircraft operational protocols and capabilities; communications are clear and concise; and the candidate is familiar with aircraft nomenclature, operational protocols, and design limitations.

**(A) Requisite Knowledge.** Means of contacting and accessing agencies with air assets, the role of aircraft in the support of floodwater events, the limitations of the available aircraft in the conditions associated with the rescue environment, and the role of the rescuer as part of an aviation team.

**(B) Requisite Skills.** Implement a notification plan to request air assets, develop a list of tactical objectives to be achieved by the aircraft, and communicate mission priorities with the aircrew or operator of the aircraft.

**23.2.6\*** Implement measures identified by the AHJ to limit exposure of victims and rescuers to potentially contaminated floodwater given a floodwater event, a flood rescue tool kit, protocols and practices identified by the AHJ, and access to the required engineering controls and decontamination tools so

that the sources of potential contamination are identified and their effects and those of cross-contamination are minimized.

**(A) Requisite Knowledge.** Sources of contamination, indicators of the presence of contaminants, methods to limit exposure to contaminated water, and decontamination methods targeted at the potential specific contaminants.

**(B) Requisite Skills.** The ability to use related engineering controls and personal protective equipment (PPE), determine the practices that limit an individual's likelihood of exposure to contaminants, and implement methods for the removal of potential contaminants or to render them inert.

**23.2.7\*** Identify locations at a floodwater search and rescue incident that have a high probability of containing victims, given a flood rescue scenario, and a tool kit, so that all accessible areas of the incident are surveyed and the victim locations are marked.

**(A) Requisite Knowledge.** Locations that are typically associated with areas of entrapment or refuge during floodwater events, including the interior of vehicles and attic spaces of structures, and human behavior during flood events.

**(B) Requisite Skills.** Conducting a search, marking victim locations, using search marking systems, and using communications systems to share findings.

**23.2.8\*** Manage the hazards unique to the terrain and environment when covered with floodwater or subject to differential pressures, given an incident consistent with a predicted floodwater environment and a floodwater search and rescue toolkit, so that all hazards are recognized and potential control measures are implemented.

**(A) Requisite Knowledge.** Specific hazards that could be present in a floodwater environment that are hidden or covered by water and hazard mitigation measures.

**(B) Requisite Skills.** The ability to survey the rescue environment for indicators of potential hazards and avoid, isolate, or control identified hazards.

**23.2.9\*** Navigate terrain covered in floodwater, given a floodwater incident, a floodwater rescue tool kit, and practices identified by the AHJ, so that the positions of the rescuers are known, hazards are avoided, search progress is documented, and geographic baselines are established.

**(A) Requisite Knowledge.** The use and implementation of a GPS and alternate mapping techniques.

**(B) Requisite Skills.** The ability to establish a baseline location using a GPS or other improvised method from which to conduct a search or coordinate the movement of resources and use of methods to determine the location of submerged hazards and geographical features.

**Δ 23.2.10** Terminate an incident, given PPE specific to the incident and a floodwater rescue tool kit, so that rescuers and bystanders are protected and accounted for during termination operations; scene documentation is performed; scene control is transferred to a responsible party; potential or existing hazards are communicated to that responsible party; debriefing, postincident analysis, and critique are considered; and command is terminated.

**(A) Requisite Knowledge.** PPE characteristics, hazard and risk identification, isolation techniques, statutory requirements identifying responsible parties, accountability system use, reporting methods, and postincident analysis techniques.

**(B) Requisite Skills.** The ability to select and use hazard-specific PPE; decontaminate PPE; use barrier protection techniques, data collection, and record-keeping/reporting protocols; and conduct postincident analysis activities.

**23.2.11** Perform a nonentry floodwater rescue from a rescue platform such as a vessel, boat, watercraft, or other waterborne transportation aid, given an operator, a simulated flood environment, water rescue PPE, and a floodwater rescue tool kit, so that the assignment is completed, all performance parameters are achieved, movement is controlled, hazards are continually assessed, and any related distress signals are communicated.

**Δ (A) Requisite Knowledge.** Limitations, manufacturer's recommendations, and operation of the waterborne transportation device and regulatory and applicable laws of safe water transportation according to the AHJ.

**Δ (B) Requisite Skills.** The ability to enter and exit the waterborne transportation aid in a floodwater condition, correct a capsized waterborne transportation aid, and apply packaging and movement techniques to water-bound victims.

**23.3 Technician Level.** The job performance requirements defined in Sections 17.3, 23.2, and 23.3 shall be met prior to or during technician-level qualification in floodwater rescue.

**23.3.1\*** Perform an entry rescue in the floodwater environment, given an incident scenario, PPE, and floodwater rescue tool kit, so that rescue is accomplished, and adopted policies and safety procedures are followed.

**(A) Requisite Knowledge.** Types and capabilities of PPE, effects of hydrodynamic forces on rescuers and victims, hydrology and characteristics of water, behaviors of water-bound victims, water rescue rope-handling techniques, incident-specific hazard identification, criteria for selecting victim retrieval locations based on water environment and conditions, hazards and limitations of shore-based rescue, local policies/procedures for rescue team activation, information on local water environments, and methods of breaching or defeating structural components of vehicle or structures.

**(B) Requisite Skills.** Select PPE specific to the water environment, don PPE, identify water hazards (i.e., upstream or downstream, current or tides), identify hazards directly related to the specific rescue, and demonstrate appropriate victim removal techniques.

**N 23.3.2** Develop an incident action plan for the use of watercraft to support floodwater search and rescue operations, given a watercraft, operator(s), policies, and procedures used by the AHJ, so that floodwater-specific hazards are addressed; watercraft predeployment checks are completed; watercraft launch or recovery is achieved; rescuers are deployed and recovered; both onboard and rescue operations conform with watercraft operational protocols and capabilities; communications are clear and concise; and the candidate is familiar with watercraft nomenclature, operational protocols, design limitations, and launch/recovery site issues.

**N (A) Requisite Knowledge.** Entry/exit procedures, communications techniques, boat operation techniques, design limitations, climactic conditions, characteristics of floodwater events,