

Injury During Water Entry

[Go Back to Hazard Summary](#)

Warning Signs and Symptoms

- Unknown Water Depth
- Unknown Bottom Covering of Water (Sticks, Rocks, Pilings, ...)
- Flood Zone
- Poor Navigation
- Hurrying to Meet Objective / Deadline
- Lack of Coordination
- Helicopter Water Entries (10 - 10)
- Moving Water Conditions
- Head First Entry

Causes

- Person Leaves Boat or Bank and Strikes Underwater Object

Potential Effects

- Paralyzed
- Trauma

Mitigation

- Navigation Training
- Probe Area Before Water Entry
- Water Entry by Wading / or Slow Entry
- Training in Lifeguard Water Entry Techniques
- Coordinate Person Going Into Water With Rest of Team (No Freelancing)
- Correct PPE Worn For Water Entry by All Rescue Swimmers
- Training on Helicopter Water Entry Techniques (10 - 10)
- Safety Backup for Swimmer
- Use Team of Swimmers (2) When Able

Tasks Needed

- Additional Navigation Training (Advanced Coastal Navigation, GPS, ...)

Swimmer Drowns

[Go Back to Hazard Summary](#)

Warning Signs and Symptoms

- Long Deployment Period With Strenuous Activity
- Lack of Rest Breaks
- Lack of Food / Water
- Poor Physical Conditioning
- Lack of Lifejacket
- Hurrying to Meet Objective / Deadline
- Lack of Knowing People's Abilities
- Poor Swimming Ability
- Hypothermia
- Swiftwater or Fast Moving Water
- Lack of Access Downstream
- Night

Causes

- Person in Water Tires and Drowns

Potential Effects

- Drowning, Near Drowning
- Hypothermia

Mitigation

- Life Jacket Required for All People Near Water
- Swim Test Required for All Deployable People
- Keep People Out of Water
- Restrict Access to Water
- Regular Rest Breaks
- Food / Water Available on Regular Basis
- Physical Conditioning (Swimming) Offered in Pool
- Water Captain Approves Classification of Personnel
- Preplanning for Deployment Periods / Activities
- BLS Medical Kit On Scene
- Warm Clothing Available
- Lifeguard Training for Team, Required for Swimmers
- Regular Physical Monitoring of Personnel
- Scout Out Takeout Points - Safety Briefing Including Likely Areas
- Whistle Lanyard to Lifejackets
- Rescue Swimmers Certified as Life Guards

Tasks Needed

- Physical Monitoring Sheet
- Lifeguard Recert

Struck by Boat

[Go Back to Hazard Summary](#)

Warning Signs and Symptoms

- High Traffic Area
- Lots of People in Area
- High Speed Traffic
- Poor Visibility
- Distracting Event
- Hurrying to Meet Objective / Deadline
- Known People in Water
- Loud Environment
- Flood Area
- Rough Water or Moving Water Conditions

Causes

- Person Struck by Boat

Potential Effects

- Trauma from Hull or Severe Lacerations from Prop

Mitigation

- Prop Guards on Motors
- Slow Speed Down for Flooded / Unknown Area
- Post Lookout, Especially in Poor Visibility
- Slow Speed in High Traffic Area
- Slow Speed When Known or Suspected People in Water Nearby
- Use Reach or Throw Methods - Preferred
- Use Shore Based Rescues - Preferred
- Stop Boat When Driver Adjusts Equipment, or Checks Navigation
- High Power Spotlights on Flexible Cord for Illumination
- Boat in Neutral When Unsure of Person Location (Loose Sight of)
- Spotter or Lookout Points to Person (Fixes Location)
- Row With Paddles In Calm Water and Short Distance Conditions
- Slow Down if In Doubt
- BLS Medical Kit in Boat
- High Visibility Helmets Used (Red and One White)
- Strobe Lights On Life Jackets For Night Operations
- Chemlights or Running Lights on Boats for Night Operations
- Chemlights Secured to Helmets or Shoulders for Night Operations
- Whistles Lanyard to Life Jackets
- Orange Flag Displayed When Person in Water and Other Watercraft Present
- Visually Verify Position of Motor When Person In Water Next to Boat

Tasks Needed

Loss Of Equipment in Water

[Go Back to Hazard Summary](#)

Warning Signs and Symptoms

- Loose Equipment
- Rough Water Conditions
- Poor Visibility
- Loss / Lack of Organization
- Poor Footing or Working Area
- Hurrying to Meet Objective / Deadline

Causes

- Equipment Dropped Into Water and Lost

Potential Effects

- Loss of Equipment
- Unable to Complete Mission

Mitigation

- Equipment Lanyard to Person / Boat
- Pre Rigging and Packing of Equipment
- Light Sources In Fanny Packs, Bow Bags, Life Jackets
- Stay Out Of / Away From Rough Water When Able
- Waterproof Radios and Most Other Equipment
- Water Resistant GPS Units
- Equipment Packed Away - Clear Deck, Hands Free
- Grab Areas or Lines on Boat
- Non-Skid Cleaner Used on Boat Deck
- Booties or Boots With Good Traction
- Limit Access for Water Areas to Required Personnel Only
- Floatation or Waterproof Bags Around Equipment As Needed

Tasks Needed

Dry Suit Failure

[Go Back to Hazard Summary](#)

Warning Signs and Symptoms

- Loss of Elasticity of Dry Suit Seals
- Lack of Regular Inspection of Suit
- Poor Storage Conditions (UV, Excessive Heat)
- Lack of Cleaning
- Known Problems With Similar Suits Under Same Conditions
- Small Tears or Creases in Materials
- Rough Handling or Improper Donning / Doffing
- Hurried Donning of Suit (Forget to Close Zipper, Folded Seal)
- Wearing Watches or Rings During Donning / Doffing

Causes

- Water Resistance of Suit Lost

Potential Effects

- Water Flooding Into Suit
- Exposure to Contaminated Water
- Unable to Complete Mission

Mitigation

- External Floatation Worn With Suit (PFD)
- Regular Inspection of Suits (When Putting Back in Service, Periodic)
- Storage Conditions Away From Chemicals and Out of Direct Sunlight
- Washing and Drying Suits After Use
- Talc Powdering Seals After Use and During Regular Inspection
- Bee's Wax on Zippers (When Putting Back in Service)
- Zipper Position at Storage as per Manufacture's Recommendation
- Dry Suit Hangers Used for Hanging Storage of Suits
- Seals Not Folded or Creased During Storage
- Using Diver's Coveralls as Over Garment for Environment with Sharp Objects
- Ease Self Into Water When Able to Test Water Tightness
- Suit Stays Snug After Burping
- Care of Suit Instructions Posted at Restaging Area
- Training on Donning, Doffing, Use and Storage of Equipment

Tasks Needed

Extracting Person From Water

[Go Back to Hazard Summary](#)

Warning Signs and Symptoms

- People Floating in Water
- Lack of Lifejacket on Person
- Inexperienced Boat Driver
- Lack of Adequate Rescuers to Pick Person Out of Water
- Excited or Frantic Person In Water
- Hurrying to Meet Objective / Deadline

Causes

- Person in Water Pulls In Rescuer, Flips Boat, or Harms Self

Potential Effects

- Scratches / Bruises on Victim or Rescuer
- Equipment Damaged From Grabbing Wrong Area

Mitigation

- Open Area of Boat for Hauling Victim Out of Water
- Let Frantic Victim Self Extricate
- Put Motor in Neutral or Turn Off As Needed
- Driver and Deckhand Training on Swiftwater Pickup
- Use Stationary Pickup in Light to No Current Conditions
- Victim Pickup Technique With Back to Boat
- Put Lifejacket on Victim Before Putting in Boat
- Talk to and Instruct Victim Before Making Contact
- Grab Line / Bars for Rescuer Securing
- Regular Training in Victim Pickups in All Types of Boats
- No Skid Cleaner Used Regularly on Boat
- BLS Medical Kit in Boat
- Counterweight Far Side of Boat to Balance
- Use Larger Boat In Open Water Conditions
- Use Shore Based Rescue - Preferred
- Parbuckling Technique for Hypothermic Patients (Non - Blood Pressure Drop)

Tasks Needed

- Continue Training on Victim Pickups