Technical Rescuer

Water Rescue

Rescue Techniques

- All too often rescuers become victims and as a result of:
  - Poor preparation
  - Lack of Training
  - Complacency
  - Stupidity
  - Compassion
  - SAFETY OF THE RESCUER is a top priority.

Steps To Rescue

Low To High-Risk Rescue Methods

- Shore-based rescue techniques should be exhausted before an in-water contact rescue is attempted to reduce the risk to rescuers.
- Each situation will vary according degree of rescue problem, time, temperature, and patient condition.

Rescue Options

- Conditional Rescue:
- Relies on victim to assist.
  - i.e. Throwing a rope
- Requires victim to be mentally & physically prepared to perform tasks.

- True Rescue:
- Relies soley upon rescuers to perform rescue
- Higher risk.
- i.e. hypothermic victim

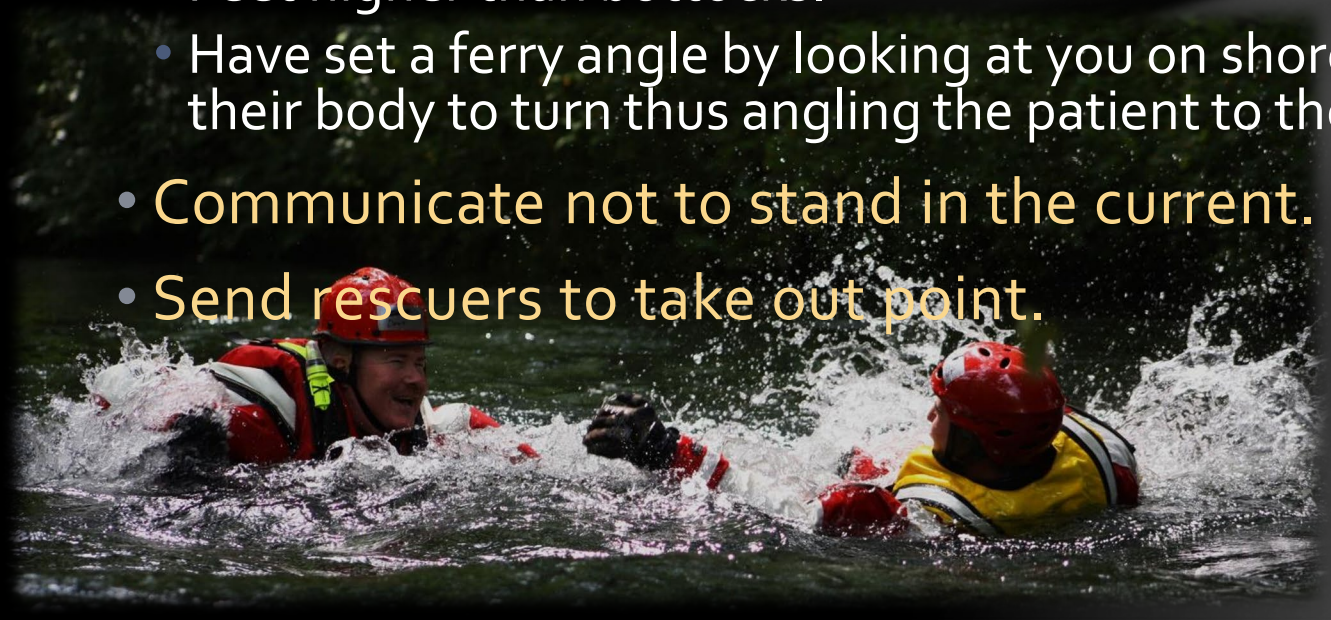
Rescue Options

- **Shout & Signal (Talk)**
  - *Least Risk and safest to Rescuers*
  - Prepare Them For The Rescue.
  - Evaluate For Signs Of Hypothermia
  - Do They Follow Directions?
  - Will This Be A Go Rescue?

Never Count On The Victim
To Assist In The Rescue.

Rescue Options & Rescuer Survival

- **Shout & Signal (Talk)**
- Is patient is injured.
- Have patient roll onto back.
- Defensive swimming position for swift water. *(Nose & Toes)*
  - Point feet downstream.
  - Feet higher than buttocks.
  - Have set a ferry angle by looking at you on shore that will cause their body to turn thus angling the patient to the rescuers shore.
- Communicate not to stand in the current.
- Send rescuers to take out point.



Rescue Options

- Communications:
- Whistle Commands
  - 1 Blast: Attention
  - 2 Blasts: Up/Upstream
  - 3 Blasts: Down/ Downstream
  - 3 Consecutively/ repeated; Emergency!!

Rescue Options

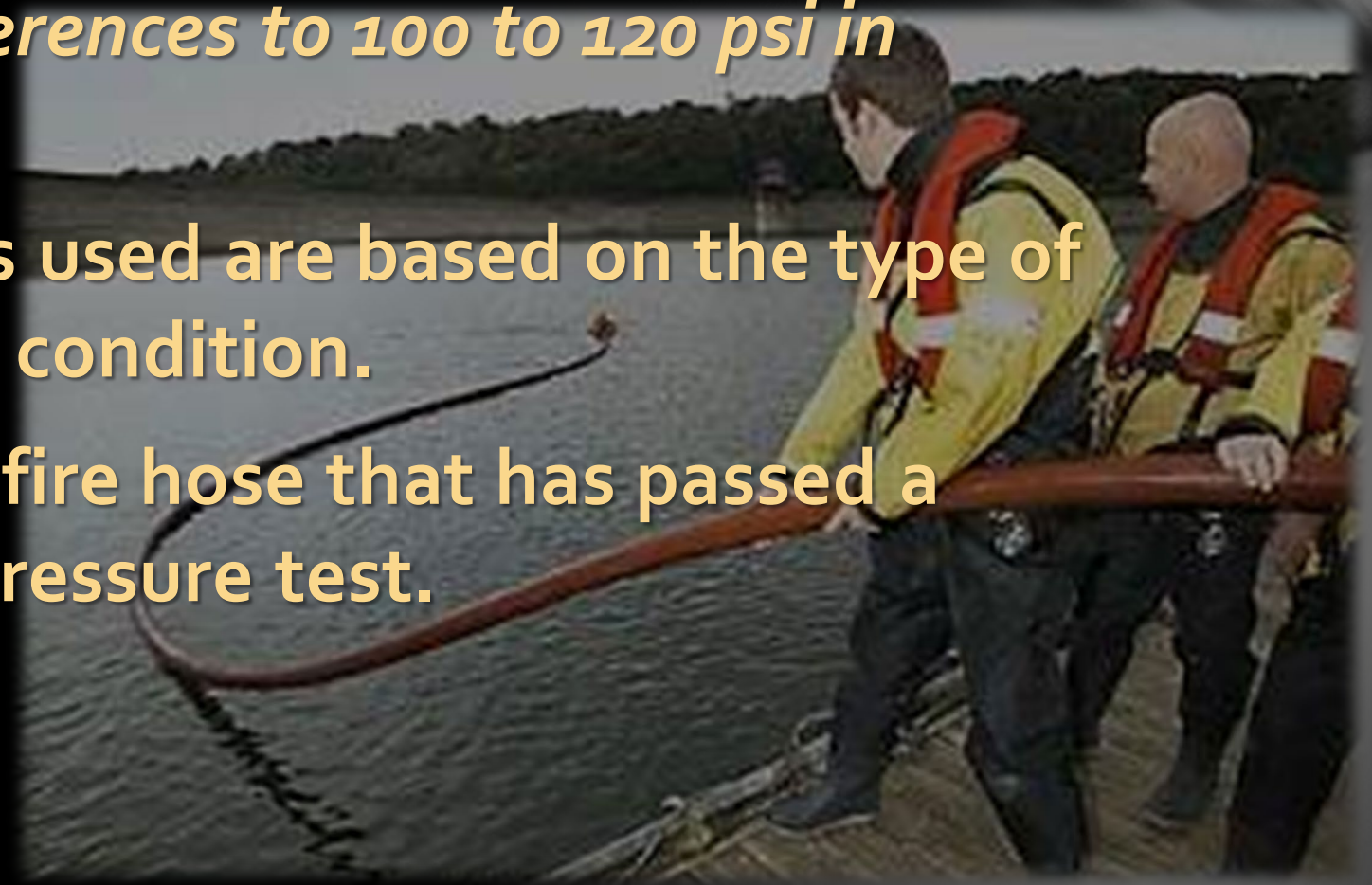
- Communications:
- Hand Signals:
  - Hand on head-okay?
  - Hand in Air- Help/ Distress
  - Arms to Right- Move to right
  - Arms to Left-Move to Left
  - Arms Crossed- Medical Help
  - Both Hands Above Head-Stop
  - Palm or clinched Fist Shown- Stop

Low Risk Methods to High Risk Rescue Methods

- Reaching Rescues:
  - Pike Poles.
  - Brooms.
  - Ladders.
  - Inflated fire hose.
  - Shovel.
  - Tree Limbs.
  - Aerial devices

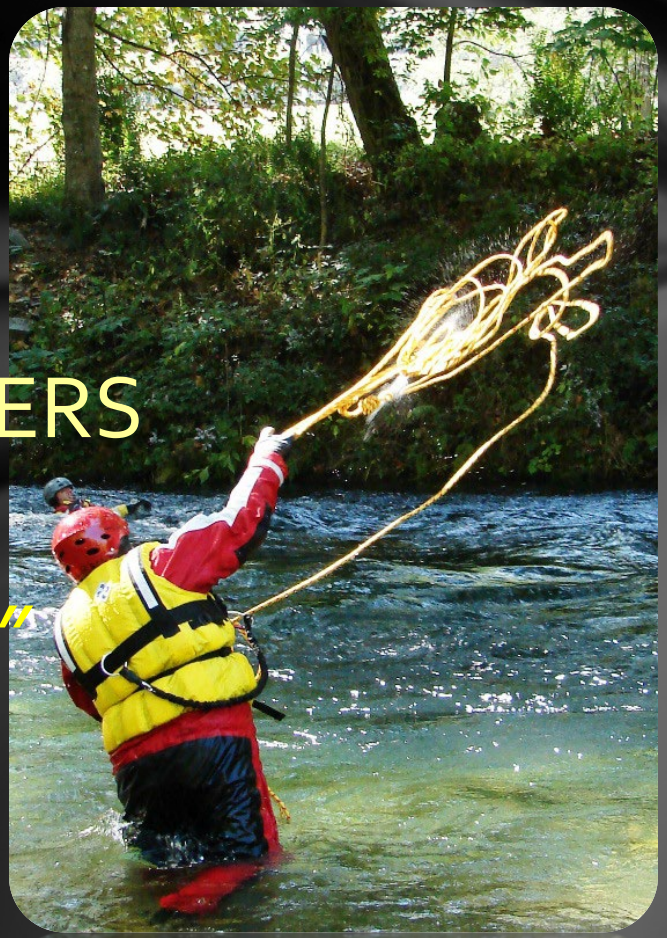
Inflated Fire Hose

- ***The pressure ranges from 30 to 45 psi in some references to 100 to 120 psi in others.***
- **Pressures used are based on the type of hose and condition.**
- **Use only fire hose that has passed a current pressure test.**



Low Risk Methods to High Risk Rescue Methods

- Throw Rescues:
  - PFD'S !!!!
  - THROW BAG W/ ROPE
  - FOAM BUCKET / COOLERS
  - LIFE RINGS
  - *"Anything that will float"*

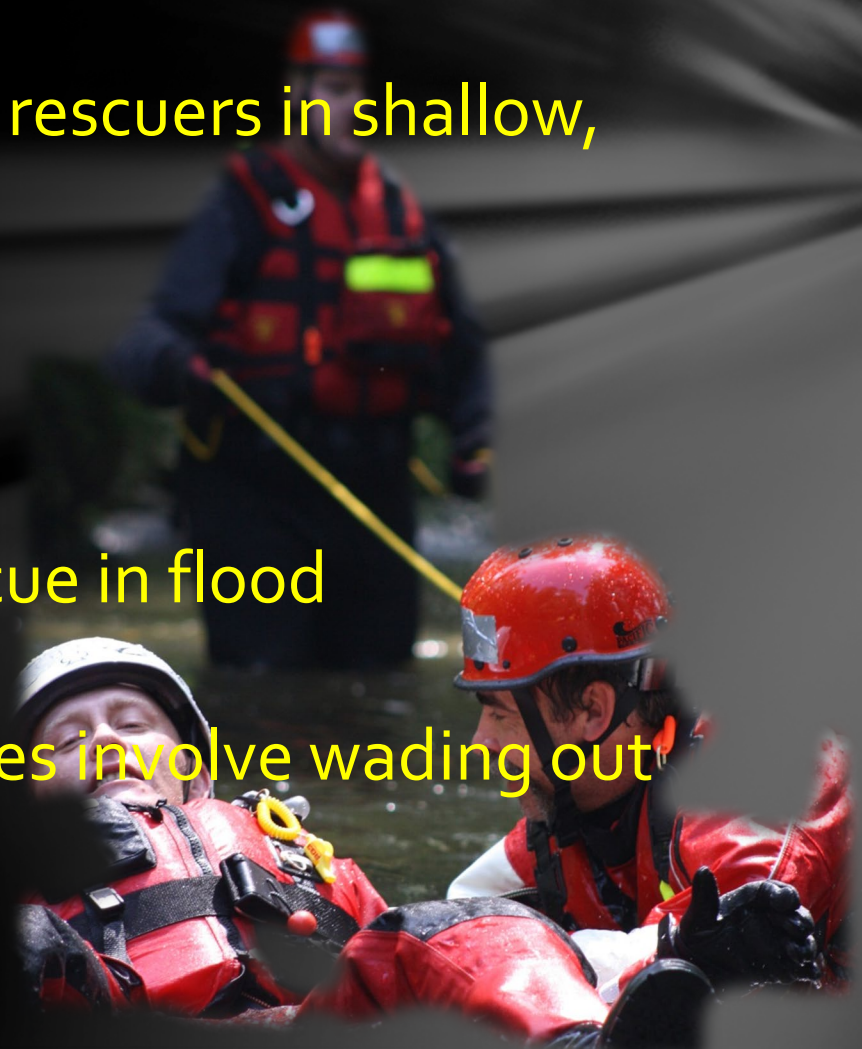


Low Risk Methods to High Risk Rescue Methods

- Throw Rescues:
- *Throwing line across the victim's chest*,
- If throw is short, it will drift upstream of the victim.
- The current drifts the line /object to the victim instead of away from them
- Instruct the victim to place the *rope over the shoulder that is opposite the shore they are being belayed to, and to position their body at the correct ferry angle*.
- The *rescuer should belay the rope on the downstream side of their body/ hand*.

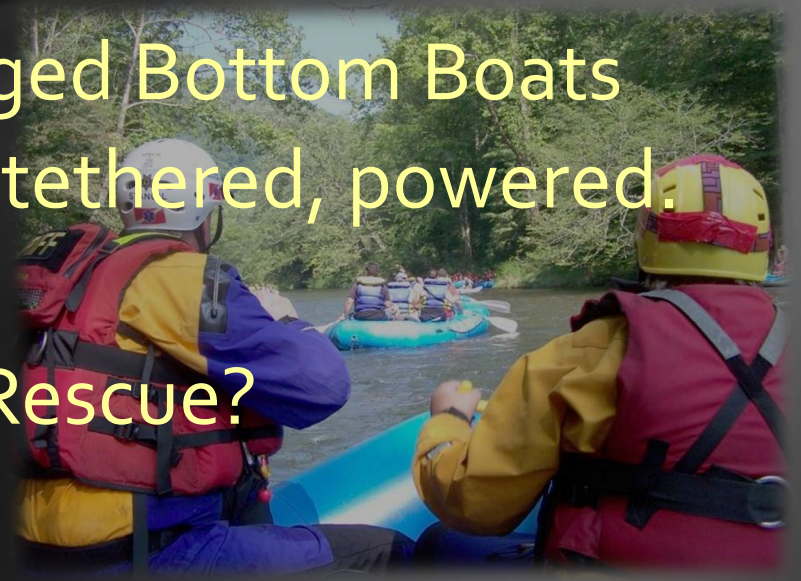
Low Risk Methods to High Risk Rescue Methods

- Wading Rescues:
- Low Risk Option for trained rescuers in shallow, slow-flows:
  - Throwing
  - Reaching
  - contact rescue
- Increases the chance of rescue in flood environments
- Majority of successful rescues involve wading out rescues.



Low Risk Methods to High Risk Rescue Methods

- Craft Rescues:
  - Boats Should Be Applicable For The Type Of Water Entering.
  - Must Be Experienced In Handling Boats In Swiftwater Environments !!
  - Whitewater Rafts, Ridged Bottom Boats
  - Boats can be paddled, tethered, powered.
  - Air or Jet Driven?
  - PWC's for Swiftwater Rescue?



Low Risk Methods to High Risk Rescue Methods

- Swimming Rescues:
  - High Risk
  - Contact Rescues
  - Towed Rescues
  - Live Bait Rescue
  - Chase Downs Rescues
  - *Pushing Victims away is considered unethical and a form of abandonment.*
  - *Last resort…Other methods have failed or will take too long*

Safely Entering the Water

- Discuss the techniques used for a shallow water environment.
- Step-in.
- Shallow water dive consists of three different methods including front, side, and back.

Low Risk Methods to High Risk Rescue Methods

- Helicopter Rescues:
- Used as a last resort
- Extremely high risk
- Requires Pre-planning
- Pro's & Con's For Rescue
- 100 mph. Rotor Wash
- Short Hauls
- Winch Operations

North Carolina
Helicopter Aquatic Rescue Team

Operations Support Specialist

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Hypothermia

- **Huddle Position:**
  - **Posturing techniques for rescuers and victims that help retain body heat and slow down the onset of hypothermia.**
- **Heat Escape Lessening Posture (HELP).**
- **Designed for one person and follows the "fetal tuck" principle.**

HELP; **Heat Escape Lessening Posture**

- Assume a “floating on the back “posture.
- Cross legs and pulls knees up into abdominal area.
- Cross arms over chest and presses upper arms against the rib cage.
- Hands are placed around the throat to protect the carotid artery & keeping hands out of the water.

HELP; **Heat Escape Lessening Posture**

- Wearing a PFD for HELP will have optimum effect.
- Can be performed without a PFD.
- Keep neck rolled forward with chin tucked into their chest.

HUDDLE Posture.

- *Designed for two or more people.*
- *Reduces heat escape.*
- *Aids rescuers in spotting victims.*
- *Boosts victims' morale*.

- Wrap arms around each other's waist
- Wrap their legs together.
- May elect to place their hands inside each other's clothing.
- **HELP and HUDDLE are best suited for open water environments, not moving or swift water environments**

Signs and symptoms of Hypothermia.

- **Hypothermia.**
- **Why is it dangerous?**
  - Shivering.
  - Reduced body temperature.
  - Cold, pale skin.
  - Dilated pupils.

Priorities to reduce hypothermia.

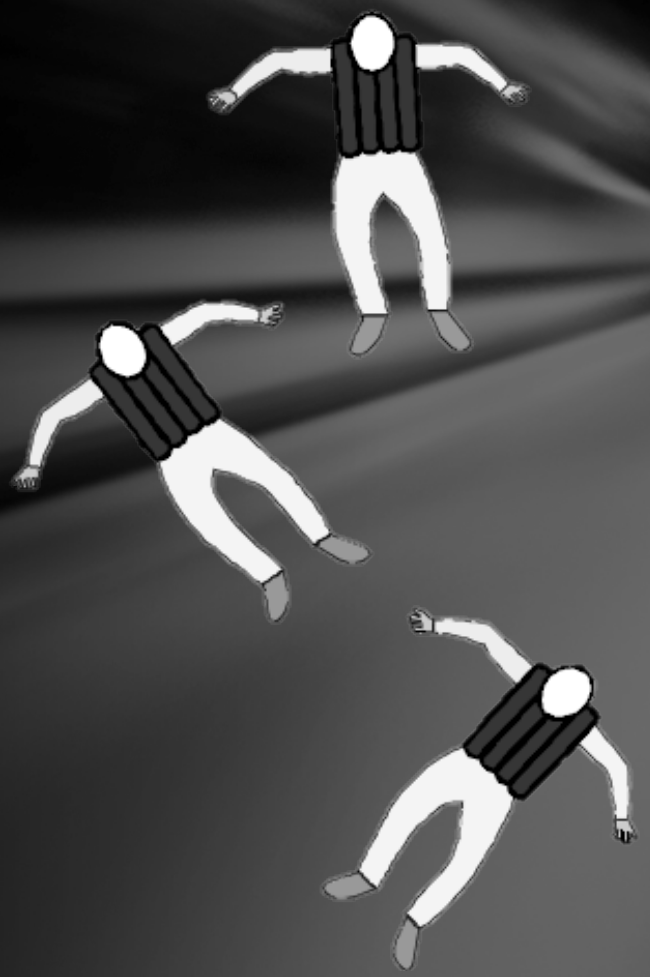
- Keep or get the victim dry.
- Gradually Re-warm
- Avoid rough Handling
- Maintain or recover core body temperature.
- Monitor carefully.

Defensive Swimming Posture

- Roll onto back and point feet downstream.
- Heels of the feet should be slightly higher than the buttocks.
- As you contact an obstacle, flatten out your body so as to slide over the obstacle or use feet to fend off the obstacle and then resume the correct posture.
- DO NOT ATTEMPT TO STAND UP IN FAST-MOVING WATER
- May get a limb entrapment , lose your balance and be pushed over and trapped under water.

Defensive Swimming Posture

- Breathing in this position must be done in the troughs between the waves in rapids. (bottom of the wave)
- Students should complete a defensive swim of at least 100 yards.



Offensive Swimming Posture

- Used Entering or leaving eddies.
- Moving across extremely fast, deep water.
- Chasing a patient downstream of a swimming rescuer.
- Approaching a strainer/ obstacle.
- Swimming a line across a river.

Offensive Swimming Posture

- Rolls onto their stomach with head pointing upstream or downstream, depending on their objective.
- If heading upstream, swimmer should enter the water at a 45-degree angle to the current vector and maintain this position of their body - establishing a ferry angle.
- Using a freestyle stroke, the swimmer swims hard toward their destination.

Offensive Swimming Posture

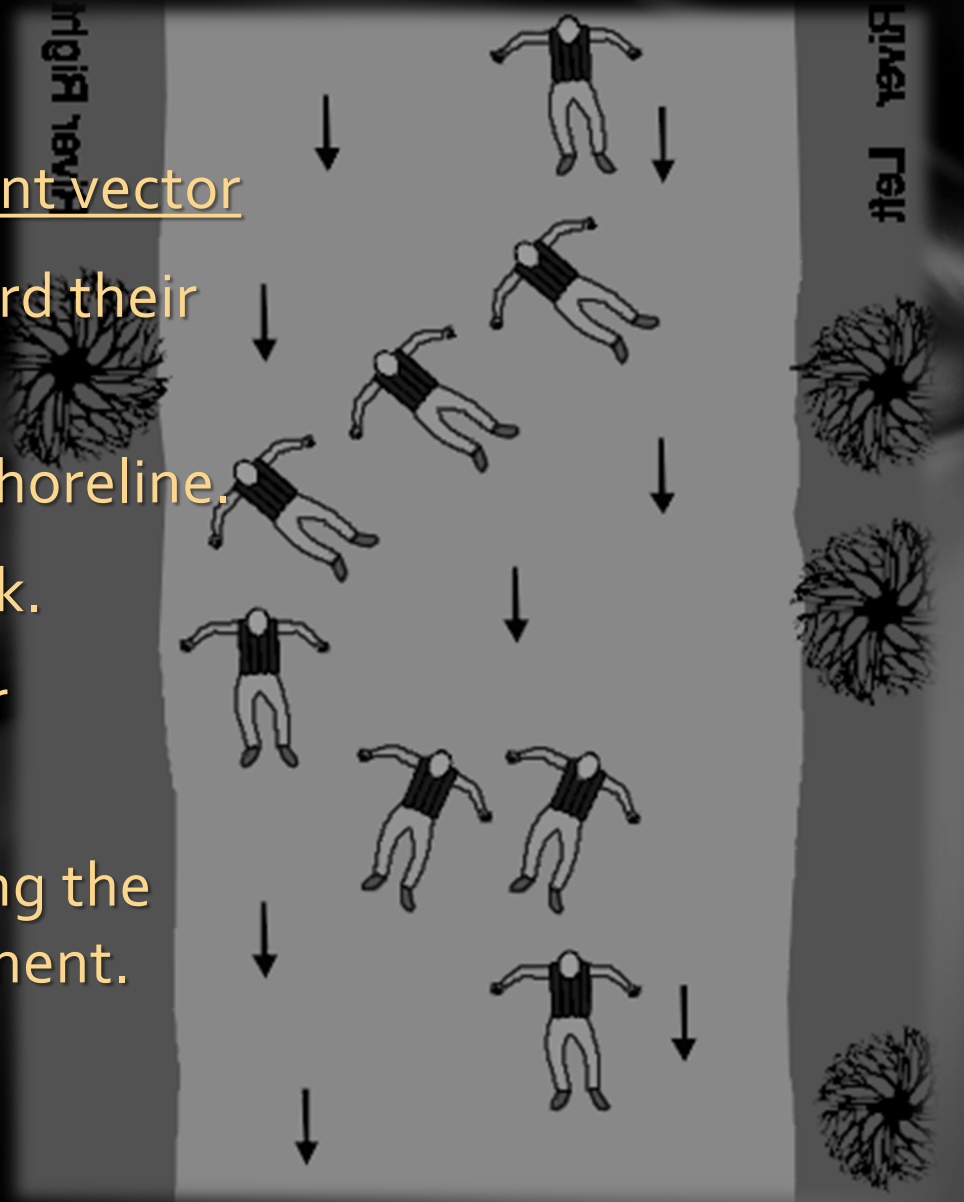
- Complications:
  - The swimmer forgets to kick.
  - Hard impacts against obstacles may cause mild to severe bruising.
  - Head and facial injuries may occur.
- Severe impacts may result in joint dislocation.
- Short bladed fins are very helpful to rescuers.

Offensive Swimming Posture

- Many rescuers wear elbow, shin and kneepads and/or purchase wet suits with built-in protection.
  - Need Mask & Snorkel to maintain vision and protect airway.
    - Avoid ingesting contaminants

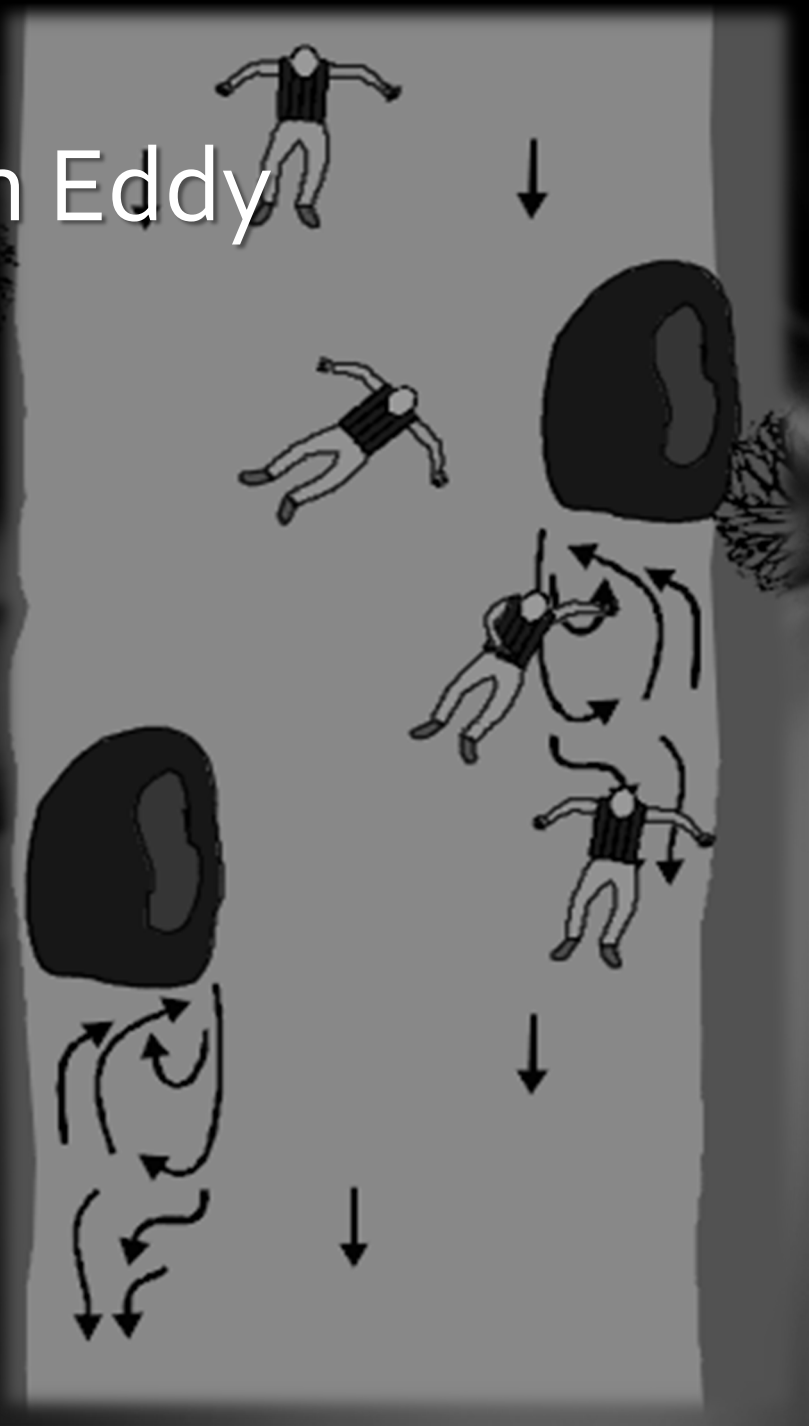
Ferry Angling

- A 45-degree angle to the current vector
- Swimmer's head pointed toward their objective
- Not a 45-degree angle to the shoreline.
- Use backstrokes if on your back.
- Use freestyle strokes if on your stomach.
- Excellent technique for reaching the shore in a swift water environment.



Entering And Exiting An Eddy

- Eddy's are good places to rest.
- Rescue locations
- Protection from debris
- Can be strong enough to cause injury



Hand Signals

- OK
- Stop.
- Help / Emergency.
- River left.
- River right.

Whistle Commands

- Stop or Attention – 1 long blast
- Upstream – 2 short blasts.
- Downstream – 3 short blasts
- Emergency – 3 long blasts “consecutive”.

- Hand signal communication at night
  - Cylume Sticks.
- Type of communication devices
  - *Mirrors (both day and night operations).*
  - *Bullhorns PA systems.*
  - *Panel Markers & Whiteboards.*
  - *Pyro technical devices are NOT suitable for non-verbal communications.*