WATER SAFETY
For Open Water Swimming Events

Dan Jones - Division Head of Aquatics and Beaches
City of Norfolk, Virginia
TYPES OF OPEN WATER COMPETITIVE EVENTS REQUIRING WATER SAFETY OPERATIONS

- Triathlons
- Long distance swims
- Beach lifeguard competitions
- Running events with water obstacles
- Adventure races
- Other?
TYPICAL TRIATHLON DISTANCES INCLUDE:

**SPRINT TRIATHLON**
Swim - 300 meters - 750 meters (varies on venue)
Bike – 10-15 miles (varies on venue)
Run - 5 kilometer run (3.1 miles).

**OLYMPIC TRIATHLON (Standard" or “International" distance)**
Swim - 1.5 kilometers (.93 miles)
Bike - 40 kilometers (24.8 miles)
Run - 10 kilometers (6.2 miles).
The Olympic distances are typically twice the sprint distances.

**HALF TRIATHLON (Half-Ironman)**
Swim - 1.9 kilometers (1.2 miles)
Bike - 90 kilometer (56 miles)
Run - (21.09 kilometers (13.1 miles).

**FULL TRIATHLON (Ironman)**
Swim - 3.8 kilometers (2.4 miles)
Bike - 180 kilometers (112 miles )
Run - 42.2 kilometers (26.2 miles)

MOST TRIATHLON FATALITIES OCCUR DURING THE SWIMMING EVENTS
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<th># of Fatalities</th>
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<td>TOTAL</td>
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- Fatality occurred during the bike portion of an event
- Fatality occurred during the run portion of an event
- Fatality occurred after the victim completed the race
- Fatality was a spectator at a race
Triathlon Water Rescues and Assists Statistics

- **Half Iron Distance Triathlon 2009 - Williamsburg, VA**
  - Water rescue staff assisted 27 swimmers
  - 1 swimmer was rescued and transported by Fire Department Boat Team

- **Sprint Triathlon 2009 - Williamsburg, VA**
  - Water Rescue Staff assisted 21 swimmers
  - 7 swimmers were rescued and transported to shallow water

- **Sprint Triathlon 2010 - Norfolk, VA**
  - Water Rescue Staff assisted 16 swimmers
  - 3 swimmers were rescued and removed from water

- **Sprint Triathlon 2010 - Williamsburg, VA**
  - Water Rescue Staff assisted 59 swimmers
  - 10 swimmers were rescued and removed from water

- **Sprint Triathlon 2010 - Hampton, VA**
  - Water Rescue Staff assisted 26 swimmers
  - 6 swimmers were rescued and removed from water
  - 1 swimmer transported to medical facility

- **Half Iron Distance Triathlon 2010 - Williamsburg, VA**
  - Water Rescue Staff assisted 18 swimmers
  - 9 swimmers were rescued and removed from water

- **Sprint Triathlon 2011 - Hampton, VA**
  - Water Rescue Staff assisted 72 swimmers
  - 60 swimmers were rescued and removed from water

One local water safety team
WHAT FACTORS CONTRIBUTE TO THESE EVENTS?

1. Possibly the adrenaline surge starting the race.

2. Anxiety, due to large number of athletes entering the water, splashing, kicking, dark water, fear of marine life or personal expectations.

3. Many athletes come from a background in running or other sports and may be less adept at swimming.

4. Swimming in open water is different than swimming laps in a pool.

5. Competitors swimming on top of one another.

6. Swimmers may not rest properly if needed (or call for help) as you could do in the running and cycling legs.

7. A swimmer in distress may not be spotted due to the number of athletes in a body of water.

8. Open water typically has less visibility than that of a swimming pool.
WHAT RESOURCES MAY BE NEEDED FOR SUCCESSFUL WATER SAFETY OPERATIONS?

• Water Safety Team – Recruitment of qualified personnel
• Watercraft – kayaks, rescue surf boards, motorboats, jet skis, etc.
• Rescue Equipment
• Medical Equipment and Supplies
• Communication Equipment
• Emergency Medical Support on Land and Water
• Local Law Enforcement
• US Coast Guard
• Marine Police

A Water Safety Team may consist of both paid lifeguards and volunteers
Water Rescue Personnel Needed!
Certified Lifeguards and Volunteer Kayakers are needed for the Patriot Race Weekend on the James River.

PATRIOT RACE TRIATHLON
(Swim-Bike-Run)
In Williamsburg, VA September 8-9, 2012

• Either or both days – 5:30am – 8:30am (early days, bring a flashlight)
• Certified lifeguards will be paid $50 for the 3 hour shift:
• Lifeguards must possess current certifications in Lifeguard Training, CPR/AED Professional Rescuer and First Aid. Proof of certification is required before the event.
• Kayak and Surf Rescue Board Lifeguards must be experienced in the use of small watercraft (kayaks, canoes or surf rescue boards)
• Land and waterline Lifeguards also needed.
• Please bring personal kayaks, rescue tubes, rescue surfboards and equipment if you have it.
• Whistle, shoes and hat are required to work this event.
• Experienced Kayakers – Volunteers:
• Water rescue kayak support staff will receive a shirt and a post race meal.
• Please bring your personnel kayak for the event.
• If you have any safety or rescue equipment please bring as well.
• Equipment includes: whistles, PFD, hat, shoes, throw rope, VHF marine radio, and extra paddle.

For more info contact:
Dan Jones daniel.jones@norfolk.gov

Please contact me as soon as you confirm your availability to work this event and indicate which day you plan to work (or both days),
It is always rewarding as we help many swimmers each year and we need qualified personnel.

Dan Jones
Event Water Safety Team Coordinator
WATER SAFETY TEAM TRAINING RECOMMENDATIONS

Certified Lifeguards are trained to:
• Recognize and respond to distressed swimmers and drowning victims.
• Communicate to swimmers and other staff.
• Perform water rescues with equipment.
• Provide basic first aid.
• All good skills to build on.

LIFEGUARDS
A higher level of conditioning may be required.

Use of specific rescue equipment such as surf rescue boards and kayaks as well as radios.

KAYAKERS MAY BE VOLUNTEERS AND/OR LIFEGUARDS
• Some Experience Required.
• Provide directions and guidance.
• Basic safety and rescue equipment required.

Personal recreational kayaks and surfboards can become rescue watercraft!
Types of rescue watercraft may include: surf rescue boards, kayaks, canoes, jet skis, stand up paddleboards, row boats and motorboats.

Experience and training required

Equip watercraft and staff BEFORE launching

**Rescue Boards**
- Experienced staff required
- At least 10 foot surf rescue boards
- Use with a rescue can or tube
- Whistle communication
- Lifeguards wear rash guards or shirts
- Spread out in each swim zone
- Assigned to swim waves
- Effective for extracting distressed swimmers

**Motorized Watercraft**
- Operate on the same VHF Marine Radio Channel
- Try to position Lifeguard/EMT on board
- Communicate with whistles, radios and signaling devices
- Predetermine extraction signals
- Difficult to navigate through swim zones

**Kayaks**
- PFDs required
- Rescue tube or buoy
- Hat
- Whistle
- Shoes
- Sunglasses
- VHF handheld marine radio
- Orange signal flags
**COMMUNICATION EQUIPMENT**

- Whistles
- Orange Flags
- Handheld VHF Marine Radios
- Cell Phones

Develop a written communication plan with:

- Cell Phone Numbers
- Radio Channels
- Radio Call Numbers
- Whistle sequences

Send the plan out ahead of time to all staff and agencies involved.

**MEDICAL EQUIPMENT**

- Land Staff and Motorboats
  - Spinal Injury Equipment
  - AEDs
  - Emergency Oxygen
  - First Aid Kits
  - Communication devices

- Medical Station Necessities
  - Tent, Table, Chairs
  - Blankets
  - Communication devices

**LAW ENFORCEMENT SUPPORT**

- Local Police
- US Coast Guard
- Event Permitting Process – 60 Days
- USCG Auxiliary Support
- Marine Police

Law Enforcement can help keep motorboats out of swim zones

**EMERGENCY MEDICAL SUPPORT**

- Lifeguards trained in First Aid
- Local EMS units
- First Aid/CPR trained Staff

Remember to establish communications
OUR JOB IS TO ENSURE THAT EACH SWIMMER MAKES IT OUT OF THE WATER

PLANNING AND LOGISTICS

• Swim Course and Time Lines
• Water Safety Team Scheduling
• Race Day Plan – Staging
• Pre-Event Briefing
• Assignments – Zone Leaders
• Communication Plan
• Placement of Resources
• Event Completion
• Post Event Debriefing
• Improving for Next Event
SWIM COURSE
Have a printed swim course for all water to review.

Include:
Swim Zones
Course Directions
Entrance and Exit
Other Pertinent Information
HAMPTON RACE 2019

Working Schedule for Water Rescue Staff – July 20, 2019 (Saturday)

- 5:30AM arrival of all Water Rescue Staff (unpack and set up equipment, boats, etc).
- 6:15AM Water Rescue Staff Briefing
- 6:45AM Positioning and Placement in All Established Zones
- 7AM Swim Event

**Land Team with VHF radios/binoculars**

Jodi Jensen – Pier  
Desiree Joseph – Beach  
Logan Smith – Beach

**Zone Leaders – Kayaks with VHF marine radios**

ZONE 1 Leader Madeline Solano  
ZONE 2 Leader Nathan Abshire  
ZONE 3 Leader Courtney Hutchens

**Rescue Board Lifeguards**

Zone 1  
- Elaine Dobson  
- Beatty Barnes  
- Trey Warren

Zone 2  
- Andrew Sabol  
- Chris Haley  
- Elijah Munden

Zone 3  
- Jacob Lynch  
- Ben Dudek  
- Maddison Ortman-Smith

**Wave Rescue Board Lifeguards - Hampton**

Wave 1 - Ella Charles (75 swimmers)  
Wave 2 - Emily Rhodes (107 swimmers)  
Wave 3 - Gabby Hamm (62 swimmers)  
Wave 4 - Jesse Richenbach (48 swimmers)  
Wave 5 - Mills Becouvraekis (52 swimmers)

**Kayakers (rescue boards/cans, VHF Radios if available)**

ZONE 1 - Tucker Lynn – Hampton Lifeguard  
ZONE 2 - Keith Williams – Volunteer  
ZONE 3 - Barry Brown – Volunteer

WATER SAFETY TEAM

ARRIVAL ON RACE DAY

- CHECK IN, SIGN IN, ISSUE EQUIPMENT
- SET UP AND STAGE EQUIPMENT

ORGANIZE BEFORE YOU HIT THE WATER
PRE-EVENT BRIEFING

- Introductions and assignments
- Issue Equipment – sign out
- Swim Zone Assignments
- Zone Leaders
- Communication Standards
- Emergency Procedures
- Swim Waves Schedules
- Swim Cap Colors - Waves

POSITION ALL PERSONNEL ABOUT 15 MINUTES BEFORE THE START OF THE RACE

Ensure the confidence of those about to swim, look professional, find your zones/waves and spread out.
WATER SAFETY TEAM PLACEMENT

PRE-EVENT POSITIONING
Creates a comfort level for athletes and helps reduce confusion once the first wave starts.

SURVEILLANCE
is performed in the water from kayaks, rescue boards, motorized watercraft as well as from land.

SURVEILLANCE FROM KAYAK
SURVEILLANCE FROM RESCUE BOARD
SURVEILLANCE FROM MOTORIZED WATERCRAFT

LAND SUPPORT, COMMUNICATIONS AND SURVEILLANCE IS ESSENTIAL FOR OPEN WATER SWIMMING EVENTS
DURING THE RACE

SWIM WAVES

- TYPICALLY EVERY 4 MINUTES
- ACCORDING TO AGE, GENDER AND/OR SWIM LEVEL
- EACH WAVE MAY HAVE A DIFFERENT COLOR SWIM CAP
- THE LAND TEAM LEADER ANNOUNCES EACH WAVE VIA VHF MARINE RADIO

Some swimmers may need individual attention

Sometimes we have to keep the swimmers on course

Stay in the water and follow the last swimmers out

Announce when the last swimmer is out of the water
Post Event Debriefing

Documentation
Assists and Rescues
Lessons Learned
Event Report
Thanks for coming out

Give yourself a hand for protecting lives today!

Ensure that all staff return to shore safely.

September 11 – Saturday – 7am swim start time
Staffing:
11 Volunteers on Kayaks
20 Lifeguards
• 4 rescue boards
• 7 on land team (bridge, waterline, start and finish areas)
• 7 on kayaks
• 1 on safety boat
• 1 on PWC
Incidents:
• 18 water assists
• 9 victim removals
September 12 – Sunday – 7am swim start time
Staffing:
8 Volunteers on Kayaks
19 Lifeguards
• 2 rescue boards
• 5 on land team (bridge, waterline, start and finish areas)
• 11 on kayaks
• 1 on safety boat
Incidents:
• 59 water assists
• 10 victim removals

Improvements from 2009 Race
- Communication with safety boats – VHF marine radios
- Operating procedures and rescue standards
- Recruitment of staff
- Documentation

WHEN THE SWIM IS FINISHED

• Inventory equipment
• Pay Lifeguards
• Sign out
• Gather to debrief
WHAT SPECIFIC CHALLENGES DO WE HAVE TO OVERCOME WHEN PLANNING AN OPEN WATER EVENT?

RECRUITING LIFEGUARDS AND VOLUNTEERS FOR THE TIMES NEEDED - EARLY

TRANSPORTING RESCUE EQUIPMENT TO RACE SITE TRAILORS AND TRUCKS NEEDED

ATHLETES WITH DIFFERENT SWIMMING ABILITIES OR HAVE NOT PROPERLY TRAINED FOR AN OPEN WATER SWIM

EARLY MORNING LIGHTING ISSUES BRING FLASH LIGHTS

RECREATIONAL AND COMMERCIAL WATERCRAFT ENCROACHING ON SWIMMERS

LARGE SWIM COURSE WITH HUNDREDS OF SWIMMERS AND LIMITED VISIBILITY

EXTREME WATER AND WEATHER CONDITONS

BE FAMILIAR WITH THE SWIM AREA:
- UNDERSTAND DANGEROUS WATER CONDITIONS, DROP OFFS, SAND BARS, SUBMERGED HAZARDS
- ASK THE LOCAL AGENCIES BEFORE THE EVENT
- DANGEROUS MARINE LIFE SUCH AS JELLYFISH, STING RAYS AND SHARKS

KNOW THE LOCAL WEATHER FORECAST TIDE SCHEDULE:
- THIS MAY EFFECT THE SWIM COURSE DIRECTION
- TRY TO PLAN THE SWIM COURSE WITH FAVORABLE CURRENTS AND TIDES
- TEST THE SWIM AREA THE DAY BEFORE AND AN HOUR BEFORE THE EVENT

OTHER CHALLENGES FOR PLANNING OPEN WATER EVENT SAFETY?
Team Management Challenges

- Directions to waterfront
- Tardiness
- Parking
- Staging equipment
- Distractions during the event
- Volunteers
- Lack of Training
- Communication issues with land
- Communication issues with support agencies
- Professionalism in general

YOUNG LIFEGUARDS, VOLUNTEERS AND EARLY MORNINGS
Thanks for joining us today!

Any questions or comments?
Final slide reserved for conference marketing purposes