Ontario Place West Channel Sports

Competition Safety Guide:

Medical and Water Safety & Rescue

Collaborators:

TO2015 Medical

TO2015 Sport Managers

Marine Unit, Toronto Police

June 10, 2015

FINAL

Contents

1. INTRODUCTION

1.1 Purpose of Document

The Competition Safety Guide will provide a resource for all stakeholders involved in the medical and water safety and rescue for the Ontario Place West Channel sports at the Toronto 2015 Pan American/ Parapan American Games (TO2015). The plan outlines the roles and responsibilities of each lifesaving service provider and provides details of their relevant procedures and protocols for each sport event and/or activity.

TO2015 is responsible for the coordination and management of relevant service providers in order to efficiently and safety respond to any emergency situations required on water or land throughout the Games duration (i.e. training and competition held at the site).

1.2 Aim and Objectives

A review of the Competition Safety Guide should be conducted at all applicable Sports' Technical Meetings and in consultation with the relevant medical and emergency service involved in the provision of medical care for the event. In particular the review of the following elements should be conducted at every meeting to ensure appropriate safety for participants:

a) Risk Assessment of the current conditions of the venue
b) Injury management
c) Current weather conditions
d) Competition statistics

2. EVENT PERSONNEL AND IMPORTANT NUMBERS

2.1 Medical Contacts

Open Water Swimming

- Lead medical doctor (LMD): Dr. John Brennan
- Lead medical practitioner (LMP): Nigel Hudson D.C.
- Lead park zone nurse: Erin Churchill and Laura Nicholson Phone TBD
- OPW race day MD/roving medical vehicle: TBD
- Athlete medical tent at OPW:TBD

Triathlon

- Lead medical doctor (LMD): Dr. John Brennan
- Lead medical practitioner (LMP): Nigel Hudson D.C.
- Lead park zone nurse: Erin Churchill and Laura Nicholson Phone TBD
- OPW race day MD/roving medical vehicle:
- Athlete medical tent at OPW: TBD

Waterski/ Wakeboard

- Lead medical doctor (LMD): Dr. Nathan Urquhart
- Lead medical practitioner (LMP): David J. Evans PT
- Lead park zone nurse: Erin Churchill and Laura Nicholson Phone TBD
- OPW race day MD/roving medical vehicle:
- Athlete medical tent at OPW: TBD

Marathon & Race Walk

- Lead medical doctor (LMD): Donna Henrikson
- Lead medical practitioner (LMP): Keren Winer and Emma Jack
- Lead park zone nurse: Erin Churchill and Laura Nicholson Phone TBD
- OPW race day MD/roving medical vehicle: TBD
- Athlete medical tent at OPW: TBD

Cycling

- Lead medical doctor (LMD): Donna Henrikson
- Lead medical practitioner (LMP): Emma Jack
- Lead park zone nurse: Erin Churchill and Laura Nicholson Phone TBD
- OPW race day MD/roving medical vehicle: TBD
- Athlete medical tent at OPW: TBD

2.2 TO2015 Medical Contacts

- TORONTO 2015 Medical venue coordinator: Leigh Davis 416-346-9052
- TORONTO 2015 Emergency Medical Manager: Steve Urzenyi 416-706-7834
- Medical Functional command centre: 416-420-8415
- Polyclinic : TBD

2.3 Lead Lifeguard

- Marine Unit Lead:
  - Name: Bruce Hollowell Bruce.Hollowell@torontopolice.on.ca
  - Cell 647-628-8591

2.4 Venue Managers

- Kri Shier- Venue Manager- 416-525-1901
- Katelyn Oliver- Deputy Venue Manager 416-573-1945

2.5 Sport Managers

- Katie Ozolins- Sport Manager 416-579-1252
- Richard Price- Sport Manager 289-251-8301

2.6 International Federation (IF) Medical Delegate or IF representative

- FINA: Dennis Ryther 210-262-1895
- FINA Secondary Lead: Thomas Haces
- ITU: Leslie Buchanan 604 904 9248
- Wakeboard/Water Ski: Paul Roberts 416-505-4044
- IAAF:

3. AQUATIC SAFETY SEARCH AND RESCUE PLAN

3.1 Toronto Police Service Marine Unit: Lifeguard Services (TPLS)

On water rescue will be provided by the Toronto Police Service (TPLS) marine unit-lifeguard services but will work in coordination with TORONTO 2015 medical team.

Guards will use both kayaks and paddle boards and be equipped with appropriate water rescue equipment. For the Open Water Swimming and Triathlon sports there will be two (2) rescue boats provided and driven by a Toronto police marine unit lifeguard supervisor (head guard) and coordinator respectively. Each rescue boat will have an additional lifeguard aboard. One lifeguard boat will have a radio to communicate with the TO2015 Sport Team on the **Operations radio channel** and the other lifeguard boat will have a radio aboard on the **TO2015 Medical team channel** (includes the OWS Safety Officer). Both boats, lifeguards and Toronto Police Marine unit will be communicating on the dedicated Marine Safety radio channel.

During waterski and wakeboard training and competition, an additional two (2) personal water crafts (i.e. Sea-Doo) will be on site with a rescue sled attached to one craft. These water crafts are operated by Marine Unit uniformed police officers and will provide assistance for complex water extraction by lifeguards if necessary.

Lifeguards are to report to the Marine Unit in time to be transported to venue in contractor uniform with radios in order to collect their equipment, be briefed and in position 15 minutes prior to training and competition time.

All TPLS staff will attend with the Toronto Police Service ID and their Games Accreditation, and wear a TPLS rash guard. They may wear a wet suit under the rash guard. TPLS board shorts will be worn unless in a wet suit. Hats and sunglasses are recommended.

The Lifeguard Coordinator will have a meeting everyday of OWS training, competition and Triathlon with the Technical Delegate to discuss their protocol, signalling for rescue or distress. Refer to daily run sheet to see specific times

3.2 Lifeguard Resource Operational Hours

Below is a schedule of guards on duty for training and competition dates.

Date	Event	Set up	Start time	End Time	Hours	Guards	supervisor	coordinator
7-Jul	OW training	0.50	2:00:00 PM	4:00:00 PM	2:00:00 AM	5	1	0
8-Jul	Tri swim familiarization	0.50	11:00:00 AM	12:00:00 PM	1:00:00 AM	5	1	0
8-Jul	OW training	0.50	2:00:00 PM	4:00:00 PM	2:00:00 AM	5	1	0
9-Jul	Tri swim familiarization	0.50	11:00:00 AM	12:00:00 PM	1:00:00 AM	5	1	0
9-Jul	OW training	0.50	2:00:00 PM	4:00:00 PM	2:00:00 AM	5	1	0
10-Jul	OW training	0.50	1:00:00 PM	2:30:00 PM	1:30:00 AM	5	1	0
11-Jul	Women's Tri	0.50	8:30:00 AM	11:30:00 AM	3:00:00 AM	8	1	1
11-Jul	OW training	0.50	1:30:00 PM	3:00:00 PM	1:30:00 AM	8	1	1

11-Jul	W Open water swim	0.50	3:30:00 PM	6:00:00 PM	2:30:00 AM	8	1	1
12-Jul	Men's Tri	0.50	8:30:00 AM	11:30:00 AM	3:00:00 AM	8	1	1
12-Jul	OW warm up	0.50	2:00:00 PM	3:00:00 PM	1:00:00 AM	8	1	1
12-Jul	Men's OW	0.50	3:30:00 PM	6:00:00 PM	2:30:00 AM	8	1	1
20-Jul	Waterski/ Wakeboard	0.50	10:00:00 AM	4:00:00 PM	6:00:00 AM	1	1	0
21-Jul	Waterski/ Wakeboard	0.50	10:00:00 AM	3:30:00 PM	5:30:00 AM	1	1	0
22-Jul	Waterski/ Wakeboard	0.50	10:00:00 AM	1:30:00 PM	3:30:00 AM	1	1	0
23-Jul	Waterski/ Wakeboard	0.50	10:00:00 AM	4:00:00 PM	6:00:00 AM	1	1	0

3.3 On-Water Rescue Equipment

- 4 Lifeguard on Paddleboards
    - Each board will carry rescue can, air horn and TPLS radio in aquapac
- 2 Lifeguard in Kayaks
    - Each Kayak will carry same as paddleboard plus drowning marker
- 2 Boats (1 driver; 1 lifeguard per boat)
    - The two power boats will be equipped with a rescue tube, air horn, TPLS radio, Pan Am radio, first aid kit, blankets, a drowning marker, two sets of masks and snorkels, a drag bar, a prop guard and all Transport Canada required equipment.
- Equipment will be delivered in advance of the training dates via water and land and stored at the venue in a container when not in use; the TPLS boats will return to Marine unit after each day's events.
- 2 personal water crafts (i.e. Sea-Doo) will be manned by Toronto police marine unit officers. One of the vehicles will have a rescue sled and will be able to mobilize for more complex water extractions. These water crafts and sled will not remain in venue and will only be available during training and competition times.

3.4 On-Water Lifeguard Positioning

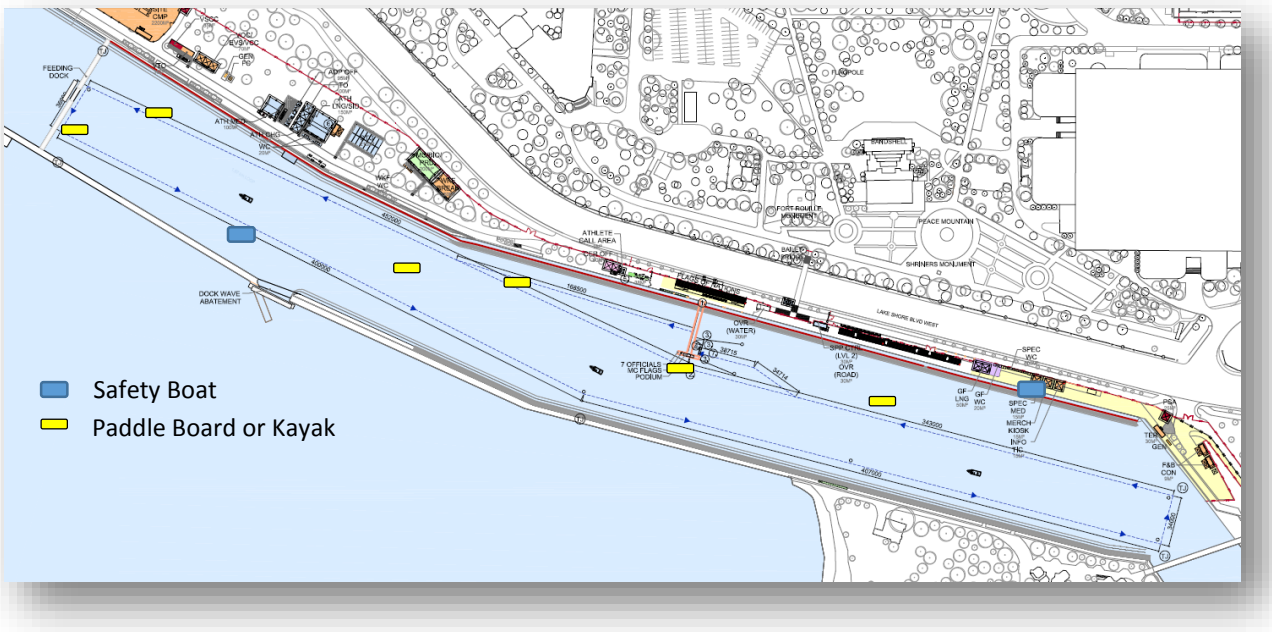
Lifeguards will be spaced around the course for training and warm up to allow coverage of the athletes who will be training individually. The power boats will remain outside the course.

Arrival and departure of lifeguards from venue

All lifeguards will arrive via boat from the Toronto Police Marine Unit. Lifeguards will be debriefed 45 minutes before on water deployment on land, in venue. Lifeguards will break on venue between sessions. Meals will be provided if shifts are greater than 5 hours. Venue Management will supply meal tickets to lifeguards and TPLS staff. Lifeguards will leave venue after completion of shift via boat back to Toronto Marine unit.

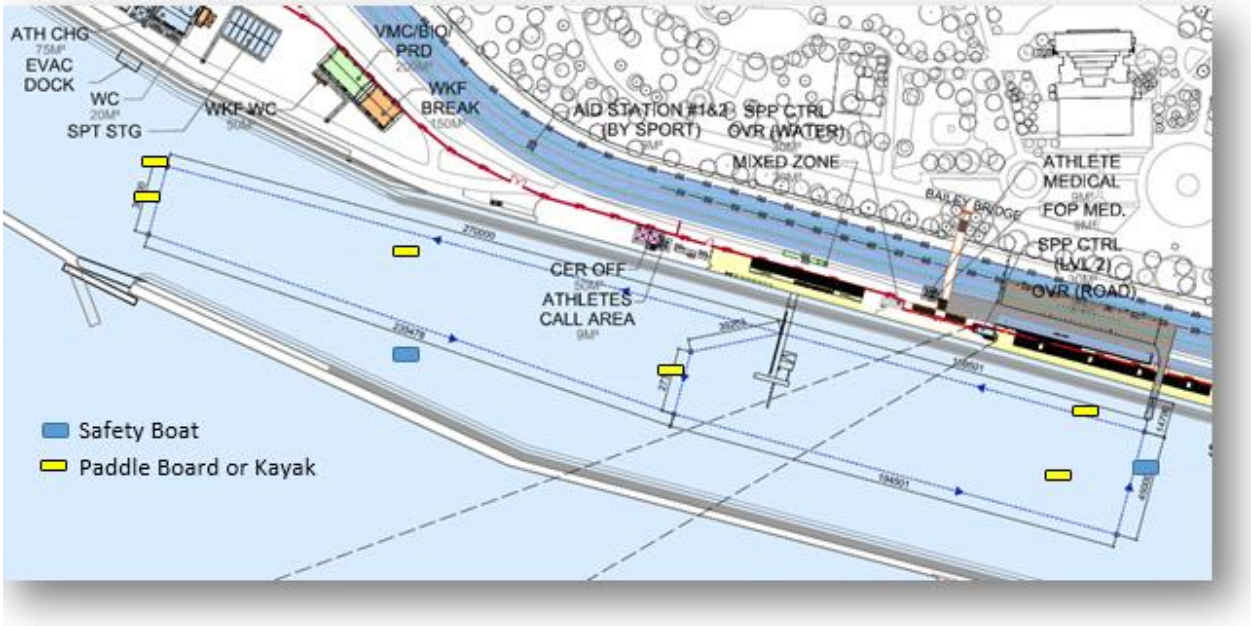
Open Water Swimming set up

During the open water races there should be a guard with the middle pack also watching for issues signaled at the front pack, and a guard tracking the back of the race (minimum recommended spacing is 400m). These guards can hand off their groups as the race proceeds around the course. Guards on paddle boards and kayaks should be positioned inside the course.



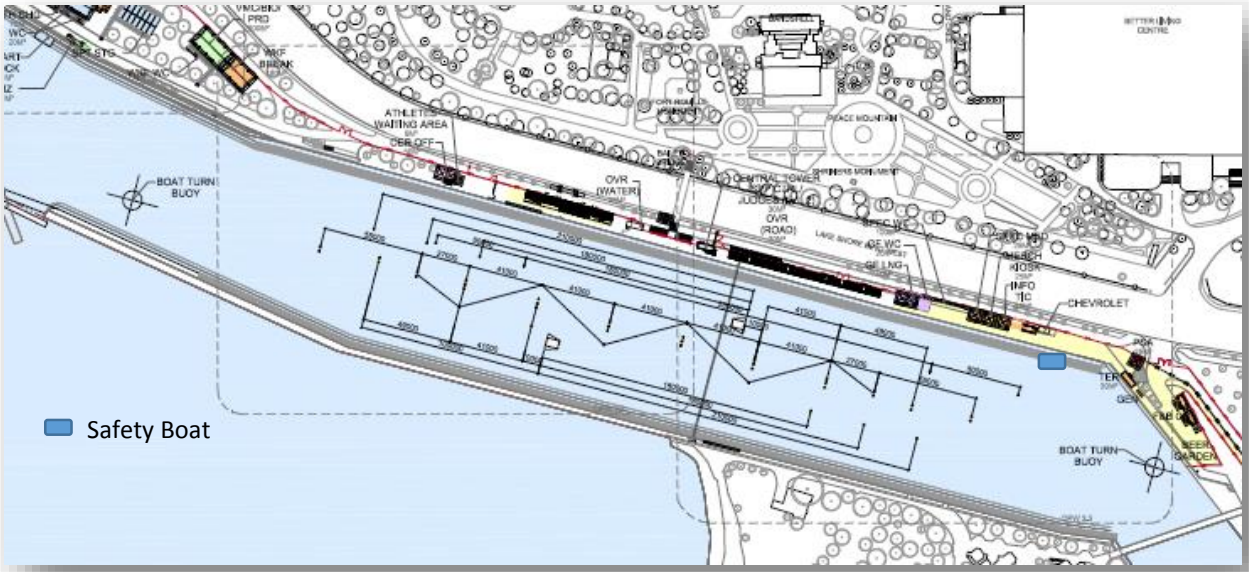
Triathlon set up

Lifeguards will be spaced around the course for training and warm up to allow coverage of the athletes who will be training individually. During the open water swimming race and triathlon race, guards will be positioned at each buoy and will follow the pack from the rear to the next buoy.



Waterski/ Wakeboard set up

There will be 1 Lifeguard and boat during the training and competition for Waterski/ Wakeboard. In addition Toronto police service will have two personal water crafts. One of the personal water crafts will have a sled attached for assistance with any complex removals.



3.5 On-Water Rescue Process

1. In the event of a near drowning incident, rescue will be performed by the Lifeguard via the appropriate resources (rescue boat, kayak, paddleboard, swimming, etc.).
2. On water **Lifeguards**, after recognizing a situation, will be responsible for signalling rescue boat using a flag or a radio on the lifeguard channel [neon pink (MINOR) green (MAJOR) colour]. The first lifeguard will secure the victim and relay the necessary information to rescue boat (see communication section below).
3. **Rescue boat** will approach the victim and s/he will be taken on-board. Further care will be administered as needed all radio protocol and notification will be initiated with the relevant parties.
4. The victim will be conveyed to the main **extraction site** using the path requested by the course director to avoid interference with the race.
5. **Medical** (MED) team will be contacted via radio call on the medical channel by one of the rescue boats on the water.
6. **Sport** (SPT) team will be notified via radio call on the ops channel by the 2nd rescue boat.

7. **MED** will respond to a predetermined extraction point (see below).
8. Resuscitation will be initiated at the earliest point possible by **Lifeguards** and/or **Medical Services**.
9. The on-venue **EMS Paramedic** will be notified and brought to the most appropriate location to assist in resuscitation and to facilitate transfer of care from MED staff to EMS.
10. **EMS** will continue care and transportation of the victim, as dictated by the circumstances.
11. The Sport manager will be notified whether the incident involved an athlete or coach so they can determine their competition status (i.e. return to play).
12. **MED** will inform the MED Function Command Centre (FCC) who will update the Main Operations Centre (MOC) regularly. Relevant documentation will be collected and faxed by MED to the appropriate medical facility.
13. **MOC** and Communications (CMM) team will activate the Crisis Communications Plan dependent on situation and severity.

In the event of a major on water incident, such as severe respiratory distress or vital signs absent (VSA), the care of the patient will likely supersede the running of the training or competition and the route to the extraction dock will be as quick as possible. Sport will determine if training or competition can be continued or if postponement is required.

3.6 Victim Submersion and Rescue

1. The **Lifeguard**, after recognizing a situation, is responsible for signalling appropriately.
2. The race could be suspended by signalling using an air horn from the Chief Referee and Safety Officer.
3. The first **Lifeguard** will note the Last Known Position (LKP) of the victim, then perform a visual check of the bottom immediately retrieving the victim if possible. The LKP will be marked by a drowning marker as quickly as possible and expanding square search will commence with masks and fins.
4. The Toronto Police Services Marine Unit Headquarters may be notified, the **race officials** along with **Lifeguards** on site will have the competitors exit the course.
5. The **Marine Unit** will be asked to send the dive team. If the LKP is poorly defined, the procedure of “dragging” can begin.
6. The **Venue Command Centre (VCC)** will contact the Main Operations Centre (MOC) and MED will call the MED Function Command Centre (FCC).
7. Enhanced emergency services will be dispatched (Marine Unit and TPLS) and the marine emergency operational centre (MEOC) will be dispatched and take over when/ where necessary.
8. When the victim is recovered, they will be taken to the main **extraction site** as quickly as possible. If this takes place on a lifeguard boat, the Lifeguard on board will begin CPR.
9. The on-venue **EMS Paramedic** will be notified and brought to the most appropriate location to assist in resuscitation and to facilitate transfer of care from MED staff to EMS.
10. **EMS** will continue care and transportation of the victim to hospital.

3.7 Sled Extraction

In the event that a complex water rescue is necessary, the Toronto police personal water craft and accompanying sled will be utilized in accordance with the Life Saving Society Patrol Rider’s procedure.

3.8 Toronto Emergency Medical Services (EMS)

TORONTO 2015 will be contracting paramedic services from Toronto Emergency Medical Services (EMS). A dedicated paramedic team will be on-site during all training and competition times. Ambulance position 1 is immediately adjacent to Athlete medical tent and paramedics will be physically positioned by extraction dock. EMS staff will be in contact with medical team through radio communications.

The EMS team and a Medical Lead will attend the Technical Meetings to discuss the medical centre information and travel procedure.

EMS will be able to assist and provide the following emergency care:

- Airways Management: intubation, oxygen and suction available
- Cardiac resuscitation: defibrillator and emergency drugs
- Spinal injury evacuation equipment and management
- Volume replacement: IV fluids plus cannulas and giving sets
- Analgesic Control: injectable include morphine and fentanyl
- Limb stabilization splint: upper and lower limb splints
- Nebulizer and Ventolin

Open Water Swimming:
For Open Water Swimming competition, EMS will provide 2 teams of paramedics and 1 ambulance, located by athlete medical. 1 team of paramedics will be positioned by main extraction dock (described below in FOP teams) and the other team will be on bikes and available at the start/finish dock.

Triathlon:
For Triathlon, EMS will provide 3 teams (2 ambulances and roving team on bikes). Positions are by the athlete medical tent, extraction dock and finish line and the roving team will be on course for the bike and run (described below in FOP teams).

Waterski/ Wakeboard:
For Waterski/ Wakeboard, EMS will provide 1 team (1 ambulance). Positions are by the athlete medical tent and extraction dock (described below in FOP teams).

Marathon/Racewalk:
For both marathon and racewalk competitions, 2 ambulance crews will be on-site. One team will be stationed at finish line in proximity to parked ambulance. A second team will be mobile on bikes and be communicating via EMS radios.

Road Cycling:
Two (2) ambulances will be present during pan and para road cycling. One ambulance and crew will be stationary in close proximity to the finish line. Second ambulance will be following cycling pack on course route. Medical car and ambulance will be in communication via cell phone/radio

Back fill Ambulance:
In the event an ambulance leaves venue to transport an individual, the VCC and medical FCC will be notified. The VCC and medical FCC will call the appropriate individuals and services e.g. Central Ambulance Communication Centre and the Toronto EMS park zone commander. An ETA will be given and VCC will inform security.

3.9 Toronto Emergency Medical Embedded in Toronto Police Marine Unit

In venue, while the water is in use for training or competition, the Toronto Police Services will have two (2) Police Marine Unit boats for security purposes. Along with Police Services on board these boats, there will be a Toronto EMS Paramedic to assist with on-water safety.

4 ON-VENUE MEDICAL

4.1 Athlete medical tent

Athlete medical tent will be located in the back of house area in a large air-conditioned tent with 10 treatment tables. Services provided in the tent can include:

1. Physiotherapy
2. Athletic Therapy
3. Massage Therapy
4. Chiropractic
5. Emergency triage
6. Medical physician
7. Nursing

The medical tent will have the following:

- Accessibility from FOP via stretcher
- Stretcher access to ambulance
- Sufficient lighting for medical examination
- Towels
- 10 Examination bed
- Chairs
- Mobile phone
- Emergency phone numbers - local hospital / ambulance service
- Warming Blankets
- Sharps bin
- Medical waste bin and bags (for blood stained items)
- Non-Medical Equipment
- Ice
- Plastic bags for ICE
- Normal waste bin

Emergency medical equipment in medical tent will include the following:

- Spinal Board
- Cervical collar, adjustable
- Oxygen - to include variable flow rate oxygen, bag valve mask, non-rebreather mask, and purpose made carrier
- Pocket mask with one way valve- in medical kits
- Crutches with handles
- Round ended scissors for removal of tape
- AED, manual
- Disposable suture kits with equipment minimum 10

- Suture material
- Xylocaine 2%
- Sterile and non-sterile gloves
- ACLS medications (on race days only)
- Splints (For immobilisation of the upper and lower limbs).

4.2 TO2015 Medical Staffing

Tent will have be staffed with a minimum of one Medical Practitioner (MP) and lead Medical Practitioner (LMP) or Medical Doctor (MD) at all times but a full complement of staff will be available before and after training/competition.

4.3 Hours of operations

Athlete medical clinic will be functional one hour before training and two hours before competition. Athlete medical will close one hour after the athletes have exited the water.

4.4 Emergency Medical Services (EMS)

Advanced care life support (ACLS) and defibrillation will be provided by Toronto EMS but ACLS drugs and AEDs will be available in medical tent if necessary.

4.5 OWS Field of Play Team

- In addition to LMD and LMP on site at all times, there will be three (3) medical first responders/rehabilitation practitioners (MP) and an additional medical doctor.
- Docks: two (2) first responders will be stationed at the main extraction site and start/finish dock, respectively.
- Post-Event: A member of the medical team will inspect the swimmers as they leave the water. A chair, in which the swimmer can sit while an assessment is made, will be provided. A wheelchair will be made available near the finish if required by any athlete.
- Land: athletes are required to pass through the first recovery area (Call Tent) which will have medical personnel stationed to assess each athlete before returning to the Athlete Tent.
- Toronto EMS will be located in close proximity to extraction dock but will be available to move locations if needed.

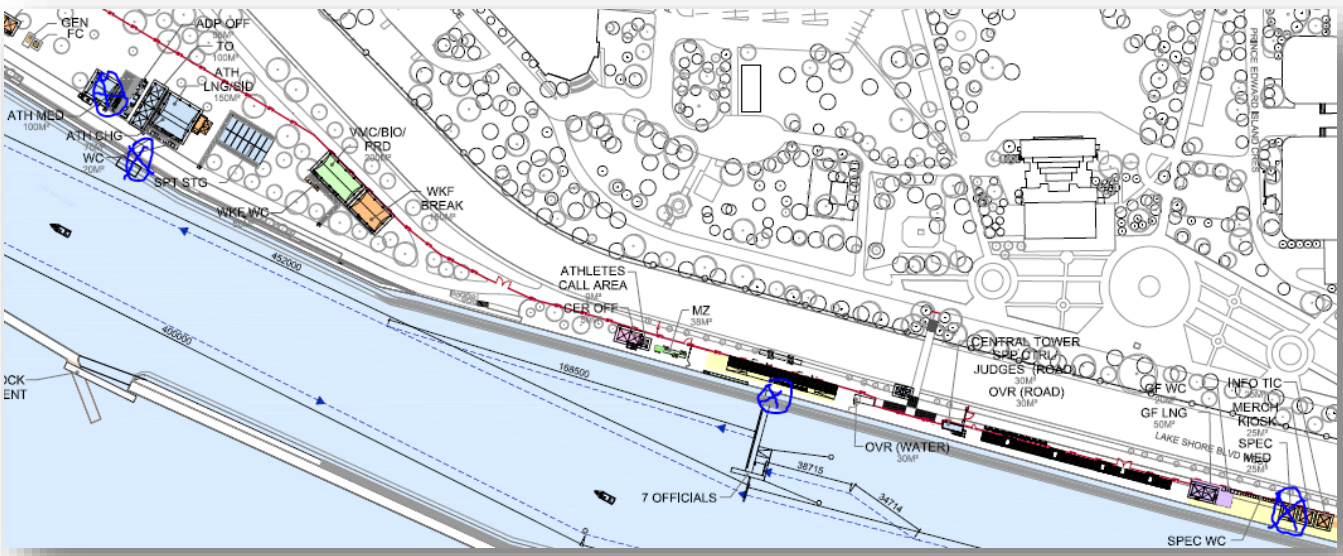
4.6 Triathlon Field of Play Team

- In addition to LMD and LMP on site at all times, there will have 14 medical first responders/rehabilitation practitioners (MP) and 5 additional medical doctors. A minimum of 2 of the first responders will be nurses and the majority of physicians will be ACLS certified.
- Two (2) first responders will be stationed at emergency extraction dock
- A medical team of 2 will inspect the swimmers as they leave the water. A chair will be provided, in which the swimmer can sit while an assessment is conducted if needed.
- Minimum two (2) first responders (nurse and MP) and 1 emergency MD will be located in transition zone and finish line. Seats will be available along with 1-2 treatment tables for athletes post-race. An EMS stretcher and pole stretcher will be available to help with transport to ambulance and/or medical tent if needed.
- Two (2) first responders will be located in athlete medical tent.
- Two teams of 2 responders will be stationed at each end of the race course.

- Two more teams of responder will be located along the race course.
- Toronto EMS will be located in close proximity to extraction dock and another team will be located at water exit and start and finish line. Both teams will have a stretcher for transport in these positions.

  Map of medical triathlon positions with ambulances:
  https://www.google.com/maps/d/edit?mid=zaQONmnbjcxk.k3vdYtkyDNjM&usp=sharing

4.7 Waterski and wakeboard medical positions



4.8 Marathon medical positions

The LMD and LMP will be on venue to help coordinate positions of medical staff.

The medical tent will be located in back of house with 2 first responders and a medical physician. The tent will provide rehab services, some pharmaceuticals and will have AED.

There will be 5 static FOP first responder teams along the course.

There will be an additional first response team at the finish line. Finish line team will have a minimum of one physician and one nurse, a medical tent with a bed, chairs, wheel chairs, spinal board and pole stretcher.

An ambulance will be located in close proximity to finish line.

EMS paramedics will be located at finish line with stretcher and ACLS equipment, drugs and a manual defibrillator.

A second pair of paramedics will be surveying the venue on bikes.

https://www.google.com/maps/d/edit?mid=zaQONmnbjcxk.kSVh6MYX8oAU&usp=sharing

4.9 Road Cycling medical positions

The LMD and LMP will be on venue to help coordinate positions of medical staff.

The medical tent will be located in back of house with 2 first responders and a medical physician. The tent will provide rehab services, some pharmaceuticals and will have AED.

There will be 9 static FOP first responder teams along the course.

There will be an additional first response team at the finish line. Finish line team will have a minimum of one physician and one nurse, a medical tent with a bed, chairs, wheel chairs, spinal board and pole stretcher.

A medical car will follow the race. The driver will be provided by SPORT and a medical doctor and nurse will be in the car. Medical doctor will have an emergency background and will be kitted with ACLS equipment, drugs and a defibrillator.

For Parapan Am road cycling a second medical car will be provided.

An ambulance will be located in close proximity to finish line.

EMS paramedics will be located at finish line with stretcher and ACLS equipment, drugs and a manual defibrillator.

A second ambulance will follow the cycle pack along the course.

https://www.google.com/maps/d/edit?mid=zaQONmnbjcxk.kuT6B2yLFcX8&usp=sharing

4.10 Racewalk

The LMD and LMP will be on venue to help coordinate positions of medical staff.

The medical tent will be located in back of house with 2 first responders and a medical physician. The medical tent will provide rehab services, some pharmaceuticals and will have AED.

There will be 3 static FOP first responder teams along the course.

There will be an additional first response team at the finish line. Finish line team will have a minimum of one physician and one nurse, a medical tent with a bed, chairs, wheel chairs, spinal board and pole stretcher.

An ambulance will be located in close proximity to finish line.

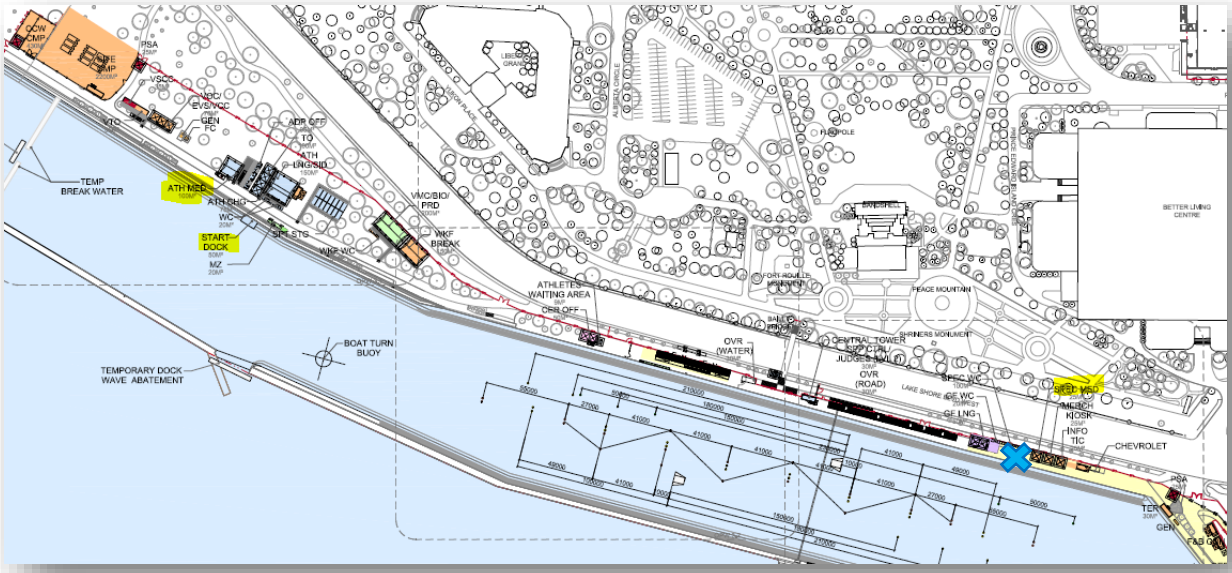
EMS paramedics will be located at finish line with stretcher and ACLS equipment, drugs and a manual defibrillator.

A second pair of paramedics will be surveying the venue on bikes.

4.11 Spectator Medical

Spectator medical will be provided by St. John Ambulance (SJA) on competition days only. SJA will be in contact with TO2015 medical team and EMS via medical radios. SJA will be equipped with appropriate first aid equipment and AEDs. The spectator medical tent is denoted by the blue **X** in the below map.

Diagram of the Athlete Medical Area, Extraction Dock and Spectator medical tent; spectator medical denoted by blue X.

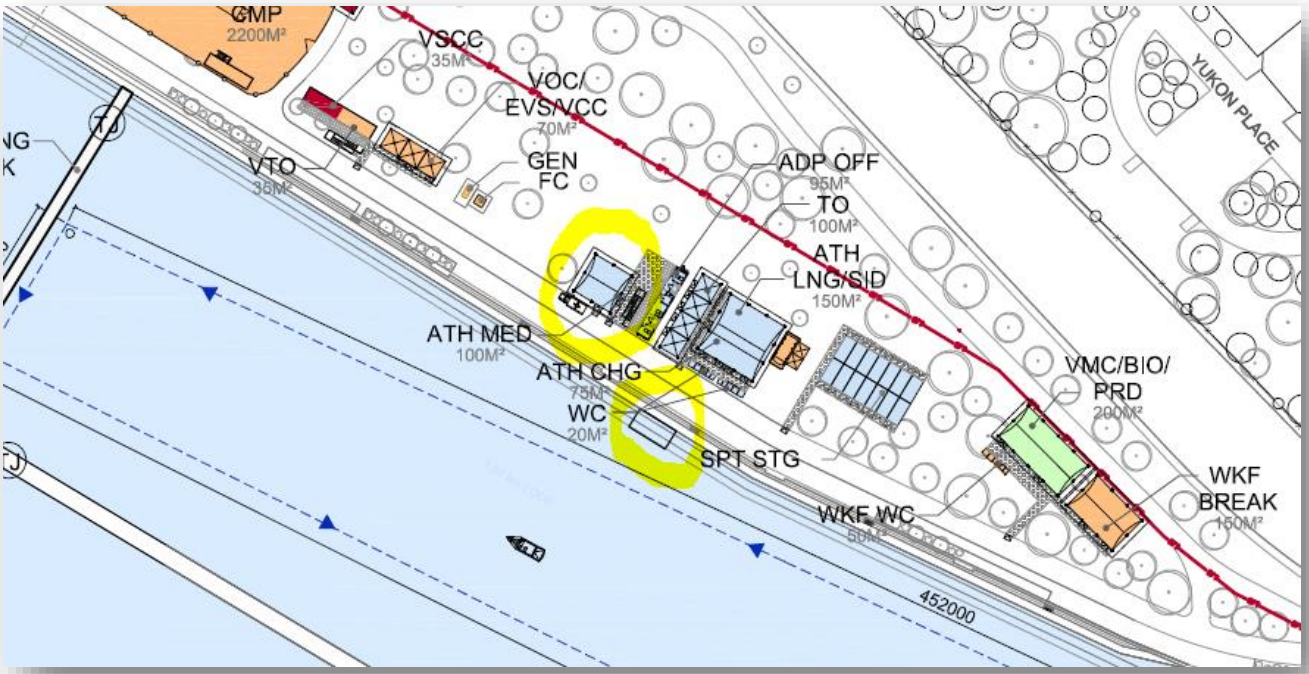


5. WATER EXTRACTION SITES

A designated main extraction site is located in close proximity to athlete medical and Toronto EMS ambulance (see diagram below). Toronto EMS will be present with full ACLS equipment including narcotics, IVs and manual defibrillation. EMS will also provide a spinal board at this position and TO2015 will have a wheel chair available for athlete transport if needed.
A pole stretcher will be located at main extraction site dock and the start and finish line.

Two alternate extraction sites have been identified for Open Water Swimming and Triathlon: the start/ finish dock and the triathlon swim exit; one alternate extraction site has been identified for Waterski/ Wakeboard: the Ontario Place Marina.

Diagram of the Athlete Medical Area and the Extraction Dock



6. MEDICAL COMMUNICATIONS IN VENUE

6.1 Water Field of Play (FOP) Signalling by TPLS

Lifeguards on the water (including the 2 lifeguard boats) will be communicating on a dedicated lifeguard channel.

Minor Situation: non-life threatening and ambulance is not required.
To signal a minor situation, a lifeguard will perform:

- Both a radio signal to lifeguards and the use of a flag (neon pink flag for Minor; neon green flag for Major)
- Flag to the power boat to be sure the location of the incident is known.
- Radio to the power boat a description of the event as quickly as possible without interfering with patient care.

Major Situation: life threatening, or requires immediate attention.
To signal a general major a lifeguard should perform:

- Both a radio signal to lifeguards and the use of a flag (neon pink flag for Minor; neon green flag for Major)
- Radio to the power boat as quickly as possible without interfering with patient care.
- When in doubt a lifeguard should not hesitate to signal a major.

6.2 TO2015 Medical Team communications for water incidents

Medical team will be on one dedicated radio medical channel. Medical at extraction sites along with lead medical, physician, and EMS will be in radio contact in case of emergency.

A FOP recovery team radio on the medical channel will be used by the extraction team/boat to communicate with the medical team at the extraction site. Medical team (OWS Safety Officer) will contact venue and sport through VCC about any potential or actual emergencies.

An additional radio will be on the other rescue boat and will be able to communicate directly with SPORT.

Spectator medical emergencies will be communicated on the medical channel between TORONTO 2015 medical team and St. John Ambulance.

6.3 TO2015 Medical Team communications for road course incidents

Medical incidents will be communicated via radio and telephone between member of the TO2015 medical team, Toronto EMS and St. Ambulance. Lead medical doctor and lead medical practitioner will coordinate medical emergencies and contact appropriate personnel as needed.

Any incident requiring ambulance transport will be communicated to Venue Command Centre (VCC) and Medical Functional Command Centre immediately (MED_ FCC). Backfill ambulance will be arranged by MED_FCC and Toronto EMS.

7. POLYCLINIC AND DESIGNATED HOSPITALS

7.1 Athlete's village polyclinic

TORONTO 2015 will be providing health care services to all OPW athletes and Games family at the Pan Am Athlete's Village Polyclinic. The following services are available at the polyclinic:

- dental
- dermatology
- dietetics
- ENT
- emergency care
- minor surgery
- orthopaedics
- ophthalmology
- physiatrist
- podiatry
- sport medicine

Emergency care at the Polyclinic will operate 24 hours a day from July 1, 2015 - August 17, 2015 excluding July 29th – August 1st. Regular clinic operational hours are 7am – 11pm.

In the case an athlete requires medical transportation, Toronto EMS services is permitted to transfer an athlete to the Polyclinic for further care, if appropriate.

Additional service that may be accessed through our designated hospital partners:

- cardiology
- gastroenterology
- internal medicine
- major surgery
- maxillofacial surgery
- neurology
- obstetrics and gynaecology
- psychiatry

7.2 Designated Hospital and Trauma centre

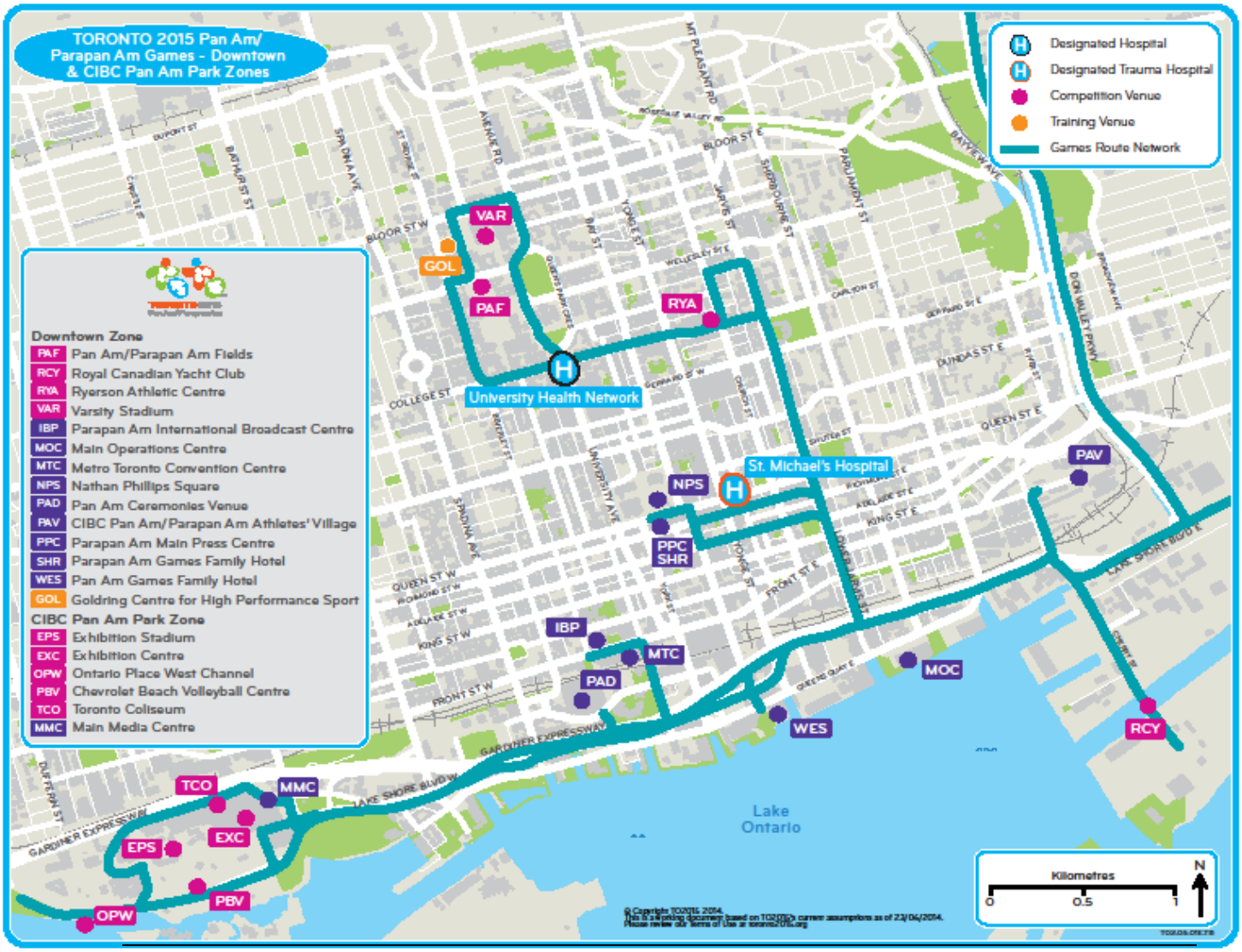
The closest **designated hospital** to OPW is Toronto Western Hospital-UHN. However, the Village Polyclinic should be recommended first for any athlete or Games family if appropriate. Toronto EMS services is permitted to transfer an athlete to the Polyclinic if appropriate and indicated.

Outside the Games' designated hospital network, St. Joseph's Health centre is the closest hospital to the venue. The closest trauma centre for the city of Toronto is St. Michael's Hospital. A decision to use a hospital outside the Games' network will be made based on severity of injury and ER wait times by the Central Ambulance Communication Centre (CACC).

Toronto Western Hospital-UHN
Address: 399 Bathurst Street, Toronto, ON M5T 2S8
Phone: (416) 603-5800
*In the case of a trauma, individuals will be transported to the closest trauma centre, St. Michael's Hospital.

St. Michael's Hospital
Address: 30 Bond St, Toronto, ON M5B 1W8
Phone: (416) 360-4000
*For spectators and workforce, Toronto Western-UHN and St Joseph's are in close proximity to the venue.

St. Joseph's Health Centre
Address: 30 The Queensway, Toronto, ON M6R 1B5
Phone: (416) 530-6000



8. Open Water Swimming - Event Standards and International Federation (IF) Rules

This guide represents the official safety guide for OPW and Open Water Swim and its submission on July 10, 2015 to FINA's officials and medical delegates serves to fulfil FINA's requirement of a published safety plan. The implementation of the plan will be the responsibility of TO2015 Sport and Medical team in coordination with FINA's Technical Delegate.

8.1 Water quality testing

1. TO2015 arranges sampling through Toronto Public Health
2. Head Guard to take test at 9 am from competition site (2 months prior, 1 month, 1 week and daily) and alternate competition site
3. Toronto Water to pickup cooler at 11:00 am from Marine Unit

4. Ontario Public Health Labs to conduct analysis. There is a usual 48 hour turnaround time for testing
5. Data submitted to Public Health
6. Communication with results to TO2015 Venue and Sport team

8.2 Water temperature testing (4.7)

A) The **water temperature** shall be measured 2 hours before the start of the race by the WHO and must be a minimum of 16'C for Open Water Swimming and 14'C for Triathlon and a maximum of 31 'C for both Open Water Swimming for Triathlon. There are currently no water temperature requirements listed for Waterski/ Wakeboard in IWWF manual.

Open Water Swimming:
The TPLS team will provide the temperature measuring device and the boat for the reading and the water temperature shall be certified by the OWS Safety Officer and one coach representative and as measured in the middle of the course, at a depth of 40 centimeters. Measurements of weekly temperature weekly will commence as of May 1st, 2015. Water quality test.

B) The **water temperature** shall be monitored as provided above at one-hour intervals during the race. If the water temperature drops below 16'C or exceeds 31'C at anyone of the measuring intervals, the water temperature shall be measured again in 30 minutes and if that measurement is also below 16'C or exceeds 31'C, the race must be stopped.

8.3 Monitoring and Rescue of Swimmers

See section 3. AQUATIC SAFETY SEARCH AND RESCUE PLAN of this publication

8.4 Safety Communication

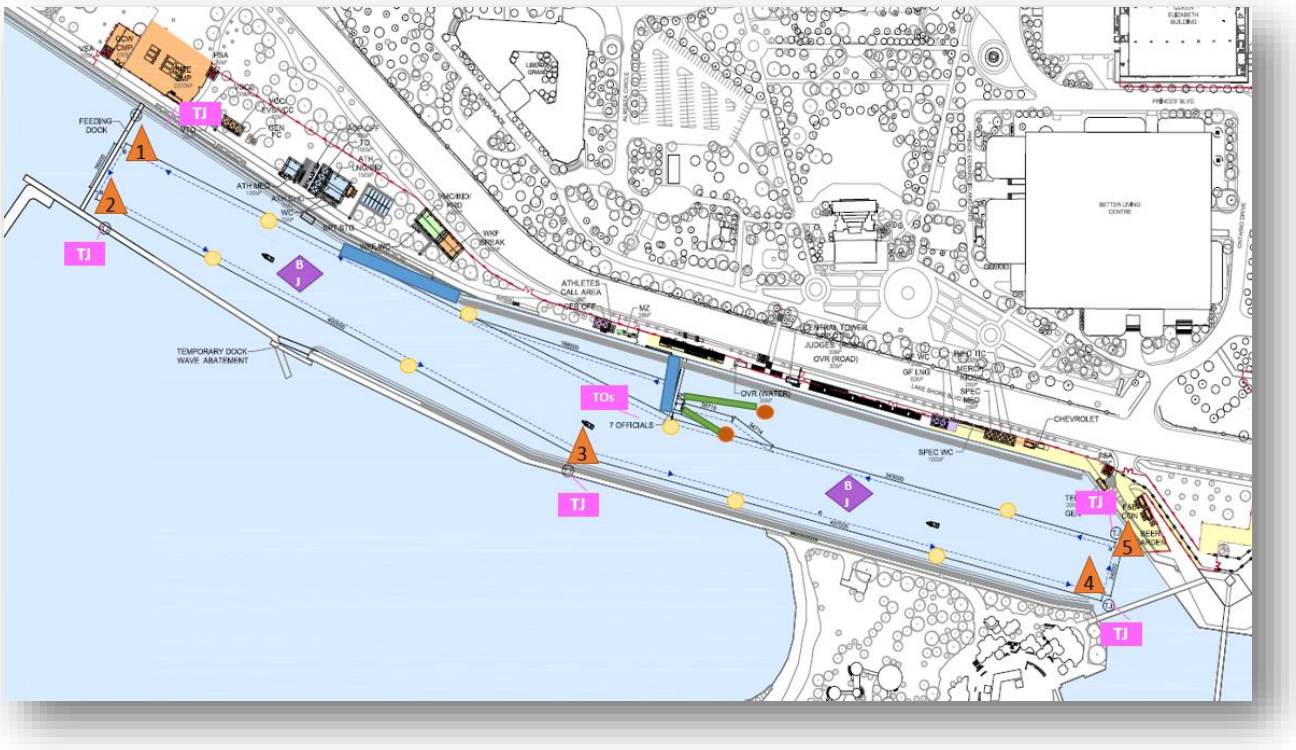
See section 6. MEDICAL COMMUNICATIONS IN VENUE of this publication

8.5 Finish line medical inspection

See section 4.5 OPW Field of play (FOP) team above

8.6 Race Course design

Open Water Swimming Course set up:



9. Triathlon - Event Standards and International Federation (IF) Rules

The following rules are outlined by the International Triathlon Union (ITU). The ITU's requirements are scalable contingent on the number of race participants. The current plans described in this guide for TO2015 medical, water and rescue safety meet or exceed the requirements listed below.

9.1 Water Temperature

The **water temperature** shall be measured every day for seven days prior to the competition to ensure a minimum temperature for triathlon of 16'C and a maximum of 31'C.

If the water does not meet this requirement; the swim discipline of the competition will be reduced or at worst case the format will be changed to a duathlon (run, bike, run)

9.2 Water Quality

The **water quality** shall be tested at the following times:

- one month prior to competition
- seven days prior to competition

The results of the tests will be communicated to the TD and Sport Manager prior to publication.

9.3 Personnel (see section 4. ON-VENUE MEDICAL)

- Two paramedics per 100 athletes is the minimum.

- There should be one physician per 200 athletes, with a minimum of four physicians.
- There should be one nurse per 100 athletes, with a minimum of six nurses.
- Two doctors must be present and on duty for the entire event. One doctor should be located within the medical facility and the other doctor must be mobile.
- Medical spotters will be placed along the swim course.
- Medical spotters will be placed every 500m on the bike course and will be supplied with radios and/or cell phones. The spotters will not be on the field of play, but will have access in the case of an emergency.
- Medical spotters will be placed on the run course (numbers will be determined based on the course design).
- Paramedics and stretchers must be in attendance adjacent to the swim exit, transition area and at the finish area.
- The LOC must ensure that all marshals and other race officials are aware of all medical facilities and their locations.

9.4 Ambulances and access (see 3.7 Toronto Emergency Medical Services)

- A minimum of three ambulances will be required, plus an additional one every 500 athletes: one ambulance will be stationed near the finish area and the medical facility two ambulances will be stationed strategically on the bike course. The final number should be approved by the ITU MD or TD.
- Ambulances will be equipped with the following: direct communication with medical headquarters and direct communication with all necessary cardiopulmonary resuscitation supplies and trained personnel.
- Ambulance emergency access routes must be planned both from the competition site and bike course.

9.5 Hospitals (see section 7. POLYCLINIC AND DESIGNATED HOSPITALS)

The nearest hospital must be informed of the event well in advance and advised of the possible emergency that may arise.

10. Waterski and Wakeboard - Event Standards and International Federation (IF) Rules

The following IWSF rules can be found in the Official Safety Manual and Policy Handbook at:
http://www.iwsf.com/SafetyManual/2015%20IWWF%20Safety%20manual%20revision.pdf

Associated sections of handbook are denoted below in bold black.

10.1 Safety Director-appointed as Technical Delegate (TD) of IF

The Safety Director shall participate with the organizers to ensure compliance with all basic safety requirements, including any applicable requirements set forth in any safety checklists that may be in effect and applicable to the event, such as the following:

- Locate safety equipment, forms, checklists, maps, first aid station, and phone numbers of law enforcement, emergency medical services, hospital, etc.

- Make sure that all required and recommended safety equipment, as listed on any safety equipment checklist, is on site
- Make sure that adequate medical personnel and transportation to medical facilities are on site or can be available within a reasonable period of time (5-10 minutes is generally recommended)
- Make sure there is an adequate safety boat or PWC (Personal Watercraft), available if/as needed (see section below regarding safety boat design, although there are many different and alternative designs which may be suitable)
- The procedure for shore swimmers, boat/swimmer combinations, and the use of safety boats/PWCs should be established in consultation with the Safety Director.
- Confirm that there is a means of communication available for Safety Director, Chief Judge, and Safety Crew.
- Notify local emergency and regulatory authorities of the event and its location, if appropriate for the specific event (e.g., special requirements reflecting the number of participants in a Show Ski event, etc.), including what will occur and what will be needed.

10.2 Safety Crew (section 4.02)

The Safety Director shall provide the safety crew the following review of:

1. Duties
2. Use of spin board
3. Use of flotation device
4. Cervical immobilization device (CID)
5. Safety boat operation/swimmer positioning
6. Instruction in rollover and basic water rescue techniques
7. A review of emergency procedures in the event of an accident.
8. Identification of location of all safety equipment and first aid facilities.
9. Discussion of any possible problems that might arise and needs such as maps and phone l locations, alternate personnel positioning.

The safety personnel, in cooperation with the Chief Judge, are responsible for the safe operation of the tournament.

10.3 Safety Equipment and Personnel (section 6.00)

Safety Boats (6.01)

Purpose:

The purpose of the safety boat is to help injured skiers and riders, and to clear the course of dropped skis, boards, or floating debris with maximum safety and minimum interference with the event progress. At least one safety boat shall be used during all events unless the Chief Judge and the Safety Director agree that they are not necessary.

Safety boats should not be used as pick-up boats for uninjured skiers or riders who are able to swim out of the course and to shore. It is imperative that the safety boat be ready for immediate use should an accident occur.

The safety boats are under the direction of the Safety Director in coordination with the Chief Judge.

Positioning (6.01.3)

Proper positioning of the safety boat is important, but may be dependent on the activity and sport division involved in the event.

In general, the safety boat should operate outside of any courses, across from the approximate center. The safety boat shall maneuver so that the bow is continuously pointed into the course to minimize back wash, always keeping well clear of the competition area and skier's path to avoid any condition that would be unfair or not safe. Skiers and riders should be asked to swim out of the course when possible to expedite pick-up and reduce wake. Safety boats, except when going to the aid of a fallen skier or rider, always travel parallel to the course and not across the course.

Safety boat personnel should be alert at all times. If a skier or rider falls, the safety boat should move in immediately to evaluate the individual and equipment if there is not an immediate hands-up sign of "OK". Any cast-off equipment (such as a dropped trick ski) should be picked up before the next pass. The greatest risk of personal injury often occurs in water three event jump events. Positioning of the safety boat shall be such that is does not interfere with the skier's path, either over the ramp in a jump effort or a balk. While this is applicable to most sites, the disposition and designation of the safety boat will be determined by the wake dispersal peculiarities of each site, as well as the position of the ramp, relative to the shore. Positioning of the boat should be such that the driver has the skier in sight at all times and can anticipate a possible fall by observing the skier's attitude on and over the ramp. Should a fall appear inevitable, the safety boat should not wait for the hands-up "OK" signal, but move toward the skier. In the event of a hard fall, the safety swimmer should always get into the water. This is of particular importance in events where verbal assessment of the skier may be difficult due to handicap or language difference. If sufficient personnel are available, an additional swimmer in the safety boat is preferable.

Drivers (6.02.1)

Safety boat drivers' availability is the responsibility of the tournament sponsor. Sufficient drivers and relief drivers must be appointed and available to the Safety Director, to assure that fatigue does not reduce efficiency. Drivers appointed should have competition driving experience whenever possible and be thoroughly familiar with the site.

Rarely is there need for more than one safety boat to attend to an injured skier or rider. The intent is to supply assistance to the skier or rider with dispatch, but without risking a collision with the skier or rider or another boat. This applies to the towboat(s) and a secondary safety boat(s).

No Driver shall pick up a skier, rider, ski, rope or any other item from the water with the ignition on.

Swimmers (6.02.2)

Designated swimmers, boat or shore, need to have reviewed with the Safety director or assigned assistants the safety procedures outlined in this manual (and as instructed in any applicable safety directors training clinic). This review should be done before the event(s) to which the swimmers are assigned.

Each designated swimmer in the safety boat, towboat, or on shore must wear an approved (ISO, US Coast Guard, etc.) personal flotation device at all times and be prepared to enter the water. If available, swimmers with water rescue and basic first aid training are preferred. It is strongly suggested that all swimmers and safety personnel be formally trained in First Aid/CPR and techniques to stabilize and backboard a contestant in the water.

It is recommended that the safety swimmers be located in the following areas:

a. In the tow boat if the room is available and the Chief Judge and Chief Safety Director agree.
b. On Shore, only if the distance is not too great as to make it difficult for the swimmer to reach the Chief Safety Director.
c. In an LOC supplied safety / rescue boat that can be positioned out of the way of the skier and towboats. This will also have to be decided by the Chief Judge and Chief Safety Director. The

swimmer should jump into the water to assist the fallen skier or rider. It is important that the swimmer jump (rather than dive) into the water so that the injured skier or rider can be kept in view at all times.

Equipment (6.03)
Each safety boat shall carry, or have quick access to, the following standard equipment:

a. A suitable back (spine) board (6' x 18" maximum size, minimum four straps or equivalent).
b. One immobilization device for the neck/head, preferably of the C.I.D. (cervical immobilization
c. Tools that can easily cut through towlines, straps, etc.
d. A two-way radio, worn by the driver of a safety boat or one of the swimmers, that is in direct communication with the Safety Director.
e. A basic first aid kit with triangular and adhesive bandages.
f. An extra flotation device.
g. Fire extinguisher.

Duplicate safety equipment is recommended for each safety boat used. A basic checklist should be provided and safety crews are to review it before the start of their event. Other equipment strongly recommended to be available: additional spine board, blankets, towels, gloves, splints for arms and legs, short and long, wood or air, an additional cervical collar, and pocket mask. These items should be used by qualified personnel only.

10.3 WATER RESCUE (Section 7.00)

A water skier or wakeboard rider may sustain any kind of injury in a fall. It is imperative that the unconscious skier or rider receive assistance with cautious urgency.

Signal (7.01)
A fallen skier or rider must clearly signal that he/she has not been injured. If a signal is not given, the safety crew must assume that the skier or rider is injured and move in immediately.
The signal by which a fallen skier or rider indicates that there is no injury, is to wave both arms above the head with the hands clasped.

This signal indicates the skier or rider is OK and does not need assistance. If this signal is not given, then the safety boat or club pickup boat should assume the skier or rider is injured and move in to evaluate. Some skiers and riders may take a moment or so to assess themselves before giving the OK signal and the pick-up boat crew must make a judgment. In such cases the safety or pick-up boat crew may begin to idle towards the person. Utmost urgency is only demanded for unconscious skiers or riders and those unable to keep their airway clear and above water.

A dazed or confused skier or rider may thrash about in the water with the arms above the head in such a way that may be mistaken for an OK signal or an OK signal may be given out of sheer habit but the skier or rider may actually be injured. In either case the safety crew must decide. If there is not a purposeful and clear cut signal given, the safety boat must respond. This signal may not apply to jumpers wearing arm slings. The tournament or show shall be stopped while the safety crew is providing care to an injured skier or rider.

Medical Emergencies (7.02)

In the event of an accident, the Safety Director and safety personnel must be prepared to be first responders. All Safety Directors should be trained in First Aid and CPR; however due to staffing and personnel problems at some tournaments not all swimmer will have had this formal training. Male and female first responders should be available. Their responsibilities are to:

a. Help prevent further injury
b. Activate the appropriate emergency system(s).
c. Calm and stabilize the injured person until professional help arrives.

Procedures (7.03)
The following procedures are procedural reminders. Every injury situation is unique and may require a different approach. Perform only what you have been trained to do. Beyond that, pursue professional assistance. Common sense should prevail.

Removing the fallen skier or rider from the water:
If the fallen skier or rider is unable to climb aboard the safety boat with little or no assistance, the event needs to be stopped and the victim needs to be floated to shore with appropriate care being given by the swimmer. Under no circumstances shall an injured skier or rider be hauled passively over the side of the boat. A swim platform is not intended for transportation of injured skiers or riders, however there may be a rare occasion in which this may be done.

Helmet removal:
In the event of an injury, a helmet should not be removed other than by the skier or rider. In-line stabilization of the cervical spine can be obtained with a properly applied spine board and CID. There may be an occasion where a face piece may need to be removed to maintain a proper airway.

Assessment of injuries
When an injured skier or rider has been removed from the water, a decision must be made as to whether professional medical and/or emergency assistance is required. All injuries should be professionally assessed either at the site or at a local hospital. Serious injuries may not always be readily apparent. It is further recommended that each tournament have a doctor or other trained medical personnel in attendance who are experienced in the assessment and management of trauma in general and athletic injuries specifically, and who are familiar with the aspects of the type of competition.

10.4 On-site Medical Facilities **(section 7.04.1):**

- A medical facility should, when possible, be established at the tournament site. This unit should be prepared to deal with minor trauma (basic first aid) so that a competitor or official can be returned to tournament participation as soon as possible in appropriate circumstances.
    - See section 4. ON-VENUE MEDICAL of this guide

- Ambulance personnel, Emergency Medical Technicians (EMTs) and paramedics are often willing to be present and serve in this capacity. These persons are trained to assess and stabilize major trauma before removing the injured person to a trauma center.
    - See section 3.7 Toronto Emergency Medical Services (EMS) of this guide

10.5 Hospital Liaison **(7.04.2):**

- Liaison with the local hospital/emergency facilities is the responsibility of the tournament sponsor. An emergency plan should be put in place by the organizing club.
    - See section 7. POLYCLINIC AND DESIGNATED HOSPITALS of this guide

10.6 Tournament Medical Officer **(7.04.3) (T02015 medical lead medical physician):**

- At some tournaments, the sponsor may be fortunate in securing the services of a physician to serve as medical officer. If the Safety Director is a physician, the Safety Director may serve in both capacities. If the medical officer is not the Safety Director, the medical officer will be responsible to the Safety Director. If a tournament is fortunate enough to have a local physician, direct communication is more easily established with a local hospital and injured persons will be treated more promptly.

10.7 Spectators **(7.04.4):**

- The Safety Director's responsibilities are to the contestants and officials. Separate arrangements should be provided for spectators by the tournament organizers. Spectator areas are however, under the jurisdiction of the Safety Director as is the risk management of the entire site. The Safety Director may assist an injured spectator commensurate with his/her training, and as a courtesy.

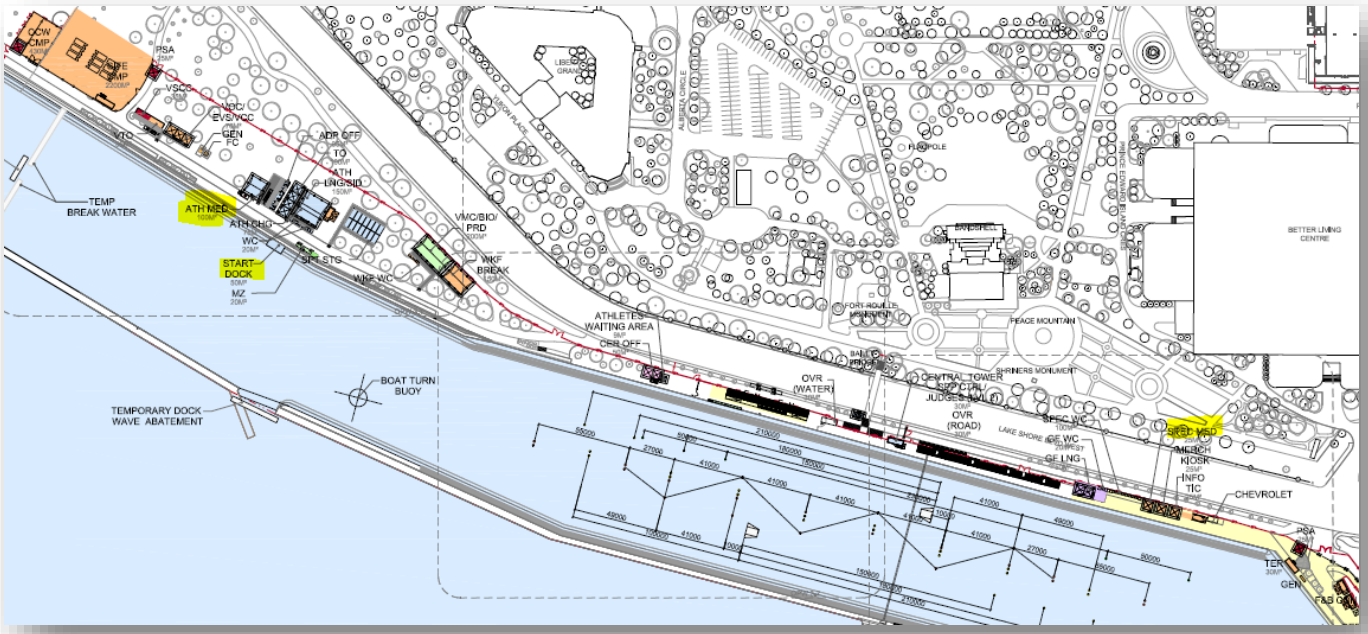
- The following safety preparations and equipment is considered by the IWWF to be minimum recommended for the safe operation of a tournament. It is the responsibility of the tournament sponsor to supply the following.
    - See section 4.7 Spectator Medical of this publication

10.8 Medical Liaison with off-site Medical Facilities

- There must be a phone or radio/telephone communication on-site for direct communication to an emergency facility or emergency services.
- Licensed or certified EMT or medical assistance available on-site or no more than 20 minutes travel away.
- Posted emergency route maps and phone numbers at several locations on the tournament site.

10.9 Course design

Waterski/ Wakeboard Course set up:



11. Marathon and Race Walk - Event Standards and International Federation (IF) Rules

The following rules are outlined by the International Association of Athletics Federations (IAAF). The IAAF's requirements for marathon races are scalable contingent on the number of race participants. The current plans described in this guide for TO2015 medical, water and rescue safety meet or exceed the requirements listed below.

Full detail on IAAF competition medical requirements can be found here underneath "Medical information for competitions"

http://www.iaaf.org/about-iaaf/documents/medical page 72-82

Each race should appoint a Medical Director (lead medical physician), knowledgeable in the particular concerns and problems of runners. Other personnel include;

- Physicians with experience and expertise in sports medicine and emergency medical care;
- Nurses (RN) with critical care and/or emergency room experience;
- Paramedics and emergency medical technicians (EMT)
- Sports physiotherapists and physical therapists (PT);
- Certified athletic trainers (ATC); and
- First responders.

11.1 Personnel Organization

- Athlete Medical tent - A physician, RN, paramedic, and/or EMT (PT, ATC, or massage therapist optional) will take care of injured runners. Aid stations shall be located every 5 km or at pre-

defined medical points around the course (in case of circuit marathons, walk races, or cross country.) AED and first-aid kits shall be available.

- Roving Medical Vehicles - Physician, RN, paramedic or EM, Defibrillator or AED experience is helpful. Roving medical vehicles and mobile medical aid, though they are impeded by runners, offer the best solution for rapid response to a collapsed athlete on a road course. The use of fully-equipped ambulances on the course is advantageous, and increases the medical response capabilities.

- First Response Teams - AED-equipped motorcycles or bicycles to have rapid access to collapsed athletes with potential cardiac arrest. Operators must be trained in the use of AED, and the team must be integrated with the local emergency medical system. Several teams must be assigned along the course to follow the main pack, and separated by 2-4 km giving rapid access to most runners.

- Finish Line Personnel - A Triage physician and team to direct the flow of casualties to the proper area for care; and Field medical site personnel divided into medical care teams that can manage medical illness, dermatological conditions, and orthopedic injuries.

- Transport - ACLS emergency ambulance coverage should be available at the finish line and along the course. Course configuration and access may dictate a greater number of vehicles or the use of "first response teams" on bicycles motorcycles, or motorized carts equipped with minimal supplies and AED. Transportation for drop-outs without medical problems should be arranged separately, so that those who cannot complete the event due to fatigue or minor injury/illness do not suffer further problems due to exposure after their race participation has stopped. Medical support vehicles or ambulances should be reserved for transportation of non-healthy runners who are unable to finish the race. The dedicated vehicles that will pick up healthy, retired runners should be provided by the LOC.

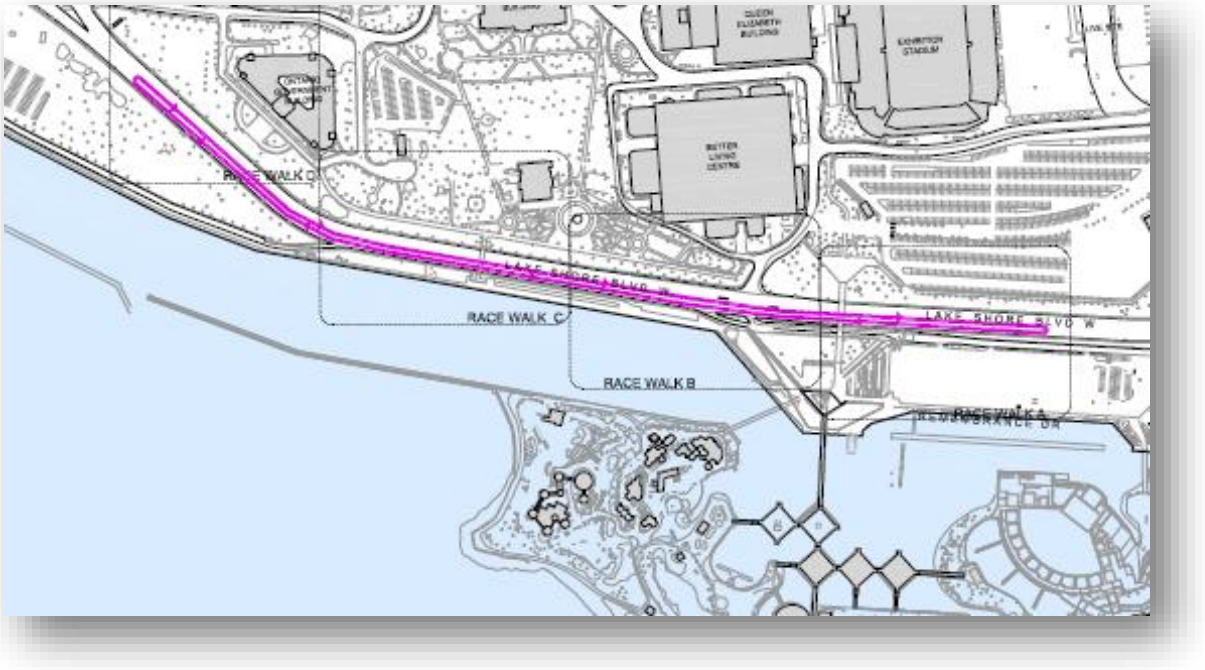
- Aid Stations
    - Type - Major aid stations are equipped and staffed with the capacity to deliver the same care provided at the finish line medical station. Minor aid stations are usually located in conjunction with water stations to provide comfort cares and minor first-aid with the intent of transporting any serious medical casualties to a facility equipped to deliver definitive care.
    - Location - Major aid stations are usually placed at high risk areas on the course which have high casualty rates or difficult access for evacuation. Minor aid stations should be located every 3 kilometers.
    - Medical Personnel - Aid station staff should include: an MD; paramedic; EMT; RN or CPR trained first-aid volunteers; communications person; and a recorder.
    - Supplies - Aid stations should have: sealed drinks; ice and small plastic bags; towels; petroleum jelly; blankets for races under 21ºC (70ºF); athletic therapist kit and supplies for minor musculoskeletal injuries; chairs; cots; and covered shelter (van or tent).

- For road race events the number of medical personnel should depend on the number of athletes and whether conditions.
    - Physicians (2-3 per 1,000 runners)
    - Nurses (4-6 per 1,000 runners)

- Other professional staff – EMT's, paramedics and athletic trainers (4-6 per 1,000 runners)

11.2 Race Walk course design

Race Walk Course set up:



11.3 Marathon race course design

Marathon Course set up: