The RaceOwl System

RaceOwl was developed by paddlers for paddlers and fulfills several key roles for the race's safety plan. The system consists of the RaceOwl website, texting services, phone apps and location trackers. It serves 3 main purposes:

- **Communication**: RaceOwl provides a critical communication link between race officials, paddlers and ground crew. Race organizers can broadcast safety-related text messages to participants to alert you to hazards such as barges and weather events. You can also send text messages to RaceOwl where volunteers can answer your questions and assist you with non-emergency issues.

- **Location**: Officials need to know that you are progressing along the race course within the expected times and in a safe manner. Race observers want to keep up with where you are along the race course. This is a key safety feature.

- **Leaderboard**: The RaceOwl website gathers race data and estimates racer position to create a leaderboard. RaceOwl also calculates and displays estimated racer arrival times at checkpoints and paddlestops. Split times, speeds and location history are also available.

For the Racer

Location reporting

Racers must provide their position along the race course. This is required for our safety protocols.

Tracking

The preferred method for reporting your position is to activate a position tracker in your boat. This means that a tracking device periodically sends boat location information to the RaceOwl system. We strongly encourage tracking so that:

- Safety crews and ground crews have a location of each boat at all times.
- Ground crews know when to expect you at the next checkpoint or paddlestop.
- Spectators can enjoy tracking racers during the event.

There are two ways to track your position:

- Use a satellite tracker, such as Garmin InReach or SPOT Tracker.
- OR use the RaceOwlRacer app for iOS or Android.

Satellite trackers

The benefit of using a satellite tracker is that you are protected from cell data outages, thus giving you continuous connectivity over the entire race course. Additionally, it's easy to keep satellite trackers running. (i.e. You can turn a satellite tracker on and almost forget about it). If you choose a satellite tracker, then you will need to set up Garmin or Spot websites to publish your location data, and RaceOwl has to be linked to those services. DO NOT wait until the last week before the race to set up tracking. Setup of these devices is time-consuming and frequently requires technical assistance. Please set up your satellite tracker as soon as possible on RaceOwl.com. Reference these documents for help:

- Inreach:
  http://raceowl.com/Documents/Race%20Tracking%20Setup%20(Garmin%20Inreach).pdf
- Spot:
  http://raceowl.com/Documents/Race%20Tracking%20Setup%20(Spot%20Tracker).pdf

If you are using tracking to RaceOwl.com with a satellite tracker, then you do not need to also track with your phone. But please download the RaceOwlRacer app anyway to have as a tracker backup should the satellite tracker fail or if you need to send a 'Did Not Finish' (DNF) message to race officials.

Smartphone tracking

Satellite trackers are great. However, tracker hardware and subscriptions can be costly. An alternative is to use the RaceOwlRacer app for either iOS or Android. Download the RaceOwlRacer app for iOS or Android here:

- iOS: https://apps.apple.com/us/app/raceowlracer/id6446606734

- Android: https://play.google.com/store/apps/details?id=com.RaceOwlRacer&hl=en

Basic tracker functionality is free and easy to set up, but please be aware that there will be some sections of the river where you may lose cell data coverage. These dark areas have improved over the years and, from a race management point-of-view, aren't a big deal. Just don't be surprised if your connectivity goes away once in a while. When this happens, the racer will appear to have stopped from the perspective of the race observer. But when you're back in an area of cell phone coverage, your data will "catch up," so to speak, and tracking will continue as usual.

Also, use of a phone app will require more 'care and feeding' than a satellite tracker. You will need to have a plan for recharging the phone, for keeping the phone dry and for keeping the phone from overheating. You also need to keep the app running. For example, don't 'double-home swipe' and kill the app, as is the habit of so many. We recommend that when you get the phone out for any other reason (i.e. texting, weather, email, whatever), take a moment to also verify that the tracker app is running and still sending location pings.

CHECKPOINT Check-In/Check-Out/DNF

Official checkpoint check-in and check-out provides a way for you to manually report your position along the race course. Manual check-in and check-out are required if you are not tracking. **If you are successfully using one of the position tracking methods, then there is no need to manually check-in and check-out. The RaceOwl system will do this for you**

automatically. If you start out tracking and your tracking system fails, then you and your ground crew will receive a message from race officials instructing you to switch to manual check-in/check-out.

That said, all racers are required to know how to send check ins, check outs, and (hopefully not) 'did not finish' (DNF). You need to have a phone capable of sending texts to and receiving texts from the RaceOwl text number.

Manual texts to the RaceOwl text number (816.340.6395) should have the form:

<boat number> <checkpoint> <day> <time> <am|pm> <in|out>

For example: When boat number 1234 arrives at Waverly just after 6 p.m. on Tuesday, they should text the following message to RaceOwl:

1234 Waverly tues 6:15 pm in

Then, they can have a burger and relax for a while. When they get ready to leave the Checkpoint they text out:

1234 Waverly tues 7:50 pm out

Manual texting works, but the RaceOwlRacer and RaceOwl apps are easier and less error-prone to use. These apps take care of the formatting for you and reduce your workload down to a couple of button pushes. They also provide immediate feedback from RaceOwl.com that your check-in/out was accepted.

Check-ins and check-outs do not have to be done by the paddler; they may be accomplished by ground crew or other volunteers. But it is the responsibility of the paddler/ground crew to make sure that check-ins and check-outs are done. Tech failure, e.g. your phone is dead, is not an excuse to not check in/out. There will be plenty of other folks around you who are very willing and able to help. Just ask them.

Your first official MR340 Race check-in on your phone happens the day before the race at Kaw Point Park between noon and 8pm. Please come with the app on your phone, and if you have questions we can help answer them there.

Phone care

Smartphones can be wonderful devices providing the racer and crew convenient access to advanced communication and navigation capability. However, you are going to be on the river

long enough that you will need to recharge. Also, phones **really** don't like getting overheated or getting wet. Heat and wet… two things the MR340 has an abundance of. What could go wrong?

Make a plan to manage your phone's shortcomings, and you will be fine. There are several strategies documented across the 340 resource websites. One example is: During the day, place the phone running a navigation app with voice feedback in a zip lock baggie inside a PFD pocket. When the battery gets low in the evening, place the phone and a charger into a clear waterproof electronics box for charging during the night with the navigation map displayed for your reference. The size of the charging brick you need will depend on how you use the phone. For most strategies a 20kmah charging brick will last the week.

Racer Apps

App	Tracking	Check in/out	Navigation	Race Map	Leader board	Checkpoint ETA
RaceOwlRacer (iOS)	X	X	$			
RaceOwlRacer (Android)	X	X				
Pro Paddler (Android)	$	$	$			
VIrtual Buoys (iOS)		$	$			

$ = app is paid or in app purchase

Tutorials

RaceOwlRacer (iOS): https://www.youtube.com/watch?v=IZODa9WVcQE
RaceOwlRacer (Android): https://www.youtube.com/watch?v=yfS7nTuBTMU
MR340ProPaddler (Android): https://www.youtube.com/watch?v=Bzt7-VmixhY

For the Ground Crew

When will the racer arrive?

From a tech point-of-view, the ground crew's goal with the RaceOwl system is to know approximately where the racer is and approximately when the racer will be arriving at the various

checkpoints and paddle stops. Estimated checkpoint and paddle stop arrival times are easy to get to on RaceOwl.com.

- Goto http://raceowl.com/MR3402023/RaceResults
- In 'Search all columns:' type in the paddler's boat number, name, or team and then click on the racer's boat number

This is RaceOwl's split screen. ETAs are shown in the 6th column. So long as the racer is tracking and the paddler is paddling, RaceOwl calculates reasonably accurate estimated arrival times to the next checkpoint/paddlestop. These estimates will not be as accurate as you look at checkpoints further downstream from the current paddler location.

Check in and check out

SImilarly to the racer, the ground crew should become familiar with how to check in, check out and DNF. Download the RaceOwl app for iOS or android.

- Android: https://play.google.com/store/apps/details?id=com.RaceOwl&hl=en ,
- iOS: https://apps.apple.com/us/app/raceowl/id1095191030?ls=1)

NOTE: the raceowl app is now only for ground crew and spectator use, it is not meant for the racer. Also note that the RaceOwl app will only allow you to select from and view about-to-start and running races - not races that are further in the future. You will be able to select the MR340 a couple of days prior to race start.

Ground Crew Apps and RaceOwl.com

App	Tracking	Check in/out	Navigation	Race Map	Leader board	Checkpoint ETA
RaceOwl (iOS)		X		X	X	1
RaceOwl (Android)		X			X	1
RaceOwl.com				X	X	X

1 = shows next checkpoint ETA only

Tutorials

RaceOwl (Android): https://www.youtube.com/watch?v=jiUQE_C00Dw
RaceOwl (iOS): https://www.youtube.com/watch?v=8SxCKNHpodg

More information

So you can learn more about how to track, use the RaceOwl apps and use the website during the MR340, we have created a series of training materials and opportunities:

- Review the training documents and videos available on RaceOwl.com. (http://raceowl.com/Home/Training).
- Review MR340 resources https://mr340.org/resources/ .
- Follow the MR340 Facebook page and Rivermiles Forum to learn about upcoming Zoom training meeting(s) and/or training videos.