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Introduction and Welcome
Seminar Chair – Eric Gray
TPYC Commodore – Jim Eddy III



Video Highlight from Transpac 2019



Notice of Race Review – Key Dates
Tom Trujillo – TPYC Vice Commodore,
Race Chairman

[Transpac Website](#)

[Transpac 2021 Notice of Race](#)



Covid 19 Pandemic TPYC Considerations



Question: Will Transpac be run next year if COVID- 19 is still an issue?

Answer: We are moving forward with all plans to run next years race and already have 40+ entries. In anticipation of potential COVID-19 impacts we are working with our race partner/sponsor Hoag Hospital to anticipate those impacts and with the benefit of their guidance take what ever steps may be necessary to run a safe and successful race.



Question: What are the steps under consideration?

Answer: The most important consideration is the safety of all participants. With the help of medical professionals at Hoag we are developing a social distancing and testing protocol to provide guidance to skippers and their crew on the steps they can take to ensure that when they leave the dock - and arrive in Honolulu - everyone on board is healthy.



Question: With all the races cancelled this year we haven't been able to complete our qualifying race. If that continues into next spring and I'm unable to sail in a qualifier will I be able to race?

Answer: Refer to the NOR which allows a non-race qualifying passage.



Question: In light of the social distancing recommendations will the SAS hands on seminar's be run?

Answer: We will discuss with US Sailing to determine if we need to amend the NOR on this.



Question: If I can't race or decide not to because of COVID related concerns will you refund my entry fee?

Answer: Aside from the non-refundable \$250 deposit, we would make every attempt to make refunds in proportion to the investment TPYC has already made in the race.



Other NOR Considerations



Other NOR Considerations

Leeward Whisker Poles & Outriggers

- only allowed with jibs, not spinnakers or large roach headsails
- NOR or SI's may limit usage i.e. at start? First part of race?

6 SCHEDULE OF 2021 EVENTS

The full schedule of events will be published as soon as possible.

Last Date for Standard Entry fee payment	Friday	March 1, 2021
Last Date to pay Late Entry Fee	Friday	May 31, 2021
Deadline for Submitting Final Rating Data ¹	Friday	May 31, 2021 1700 EDT
Deadline for "As-Built" Sails Certificate ²	Friday	June 28, 2021
Deadline for Safety Inspection Completion (See NOR 9 for details)	Two days before start	
Last Date for Complete Race Entry Process (See NOR 9 for details)	Two days before start	
Mandatory Yacht Check-in and transponder distribution see 5.5 ³	Saturday	July 10, 2021
Mandatory Person In Charge Meeting ⁴	Saturday	July 10, 2021
Aloha Send-off Party	Saturday	July 10, 2021
First Transpac Race Start	Tuesday	July 13, 2021
Second Transpac Race Start	Friday	July 16, 2021
Third Transpac Race Start	Saturday	July 17, 2021
Fast Multihull and/or Fast Monohull Yacht Start	TBD (if needed)	
Navigator's De-Brief Meeting	TBD	TBD
Honolulu Awards Ceremony	Friday	July 30, 2021

Transpac from a Designer's Perspective

Alan Andrews – Alan Andrews Yacht Design, Inc.

Chair, TPYC Technical Committee

alan@andrewsyacht.com

24 October 2020



Transpac - LA to Honolulu 2021

- Goals
 - Sail to Honolulu!
 - Arrive Safely
 - Have Fun
 - Win the Race



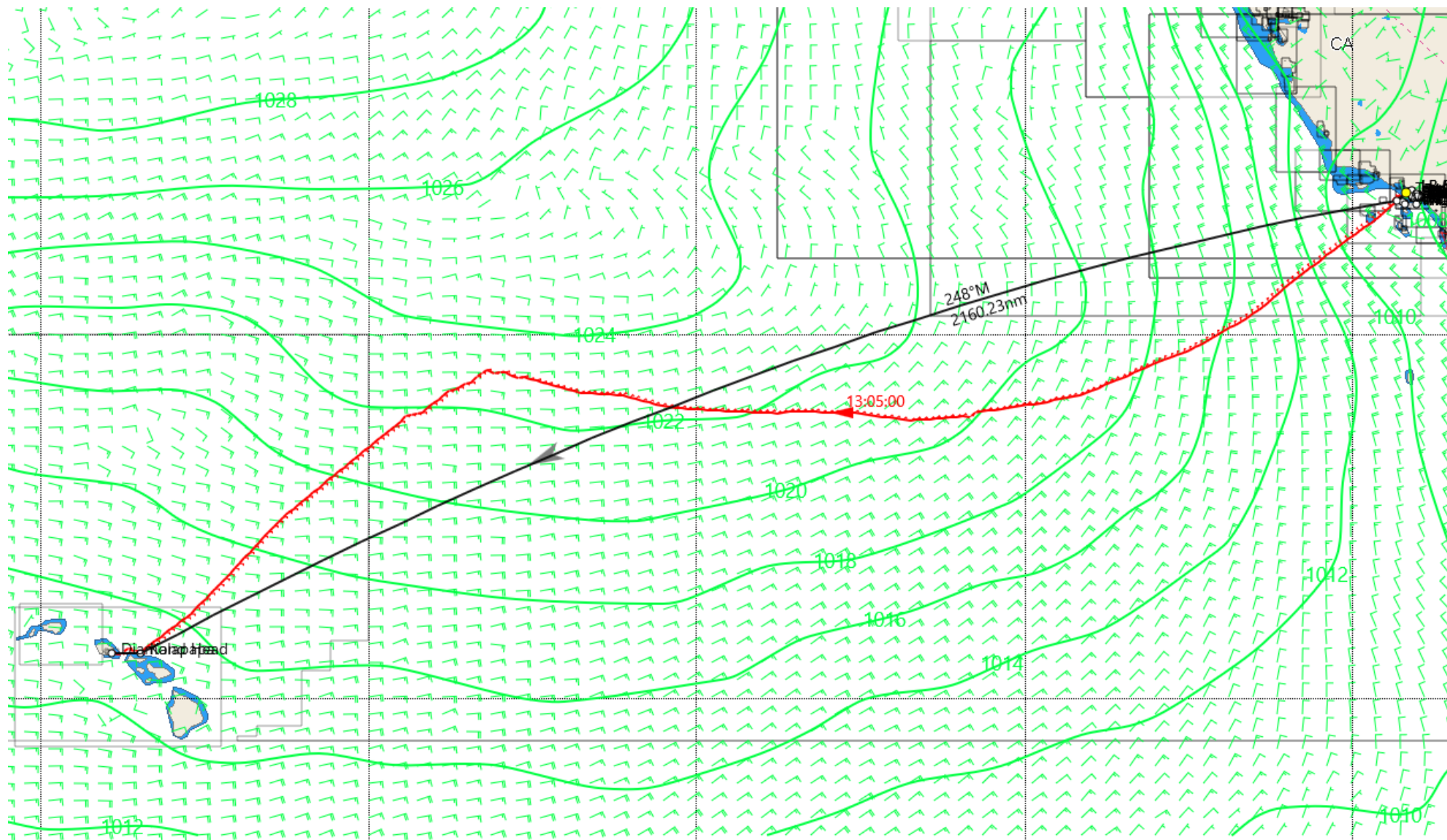
How Many Are Sailing Their First Transpac?

- Who has sailed Transpac before?
- Sailed Two Transpacs?
- Sailed more Three or More Transpacs?

Racing to Hawaii

- Tradewinds to Paradise?
- Reality is Usually Different
 - Day One – Beat beyond Catalina
 - The First Night – Beat/Reach
 - Big Breeze or Light Air?
 - First Third – Fast Jib/Spinnaker Reaching
 - Test Second Third – “Slot Cars” Broad Reach
 - Last Third – VMG Downwind in Trades; Squalls at Night
 - Last 100 Miles – Molokai Channel – YES! Wind & Waves to Paradise!





Have Fun – Biggest Goal

- It's a real damper on the Fun if the boat breaks down.
- Arriving Safely ends up a pre-requisite to Having Fun
- Preparation – Reliability so the boat doesn't break down:
 - Rudder and Steering – 2019 – Six Boats DNF; Another 2-3 Delayed
 - Most prevented by inspection, most didn't break rudder
 - "First Third" – Fast Reaching with beam waves – maximum loading
 - Haul Out – Inspect Rudder, Bearings, Steering System (Wheel(s) or Tiller).
 - Watch drying for signs of moisture in blade, particularly at stock/blade.
 - Check keel – Inspect for cracks, keel bolts, check bolt torque

More Preparation

- Inspect Rig
 - Check Standing Rigging
 - Rod – Dye check or x-ray cold headed ends; replace rod if questionable, often re-use fittings.
 - Wire – Check swage/Norseman fittings; replace if questionable
 - Composite/Fiber
 - Dyneema – Check for UV damage
 - PBO – Very specific inspection/replacement schedule – susceptible to UV & moisture
 - Carbon – Inspect with Manufacturer guidelines.
 - Check Mast – Corrosion? Fittings – Tangs, Gooseneck, Vang
 - Running Rigging
 - Check Halyards for UV damage; Prepare for chafe. Halyard locks minimize chafe
 - Spinnaker Pole? – Rig “chicken stays”
 - From Mast at pole to deck edge; can save the rig.

Safety Gear

- Hope you never have to use it but:
 - Emergency Steering –
 - Must have demonstrated it works
 - If using emergency steering, probably aren't racing, but can get to Honolulu.
 - Life Raft Storage – After 2001, on deck in hard canister or locker
 - Storm Sails – set and verify they work.
 - Heavy Weather Jib – Sometimes used racing first night
 - Storm Jib & Storm Trysail – exceptional conditions; hurricane crossed Pac Cup
- Strong mainsail – several boats' races have turned to deliveries when the main has blown out. Most important sail since only one is allowed.

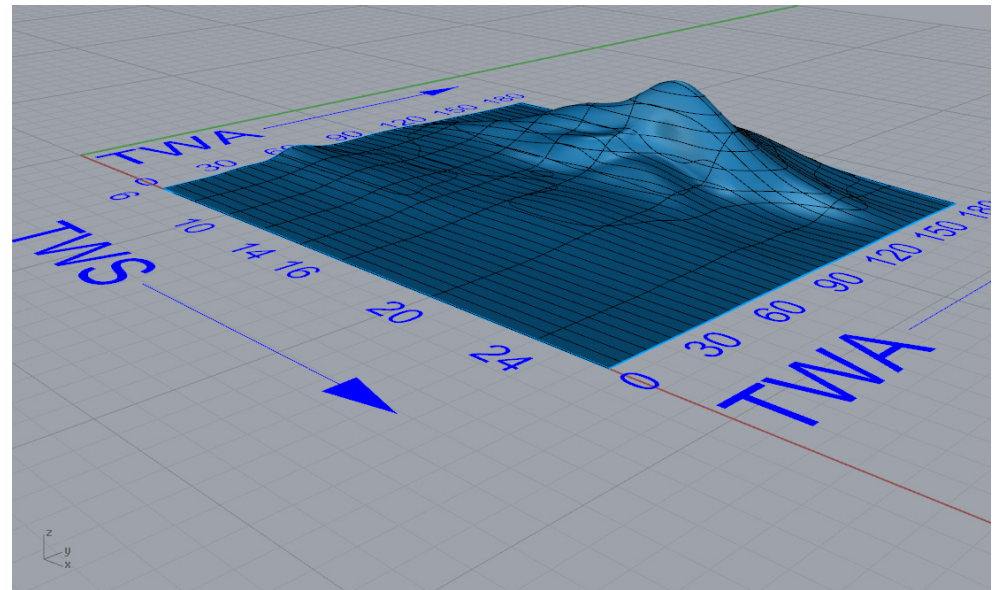
Win the Race!

- Performance – Speed to Rating
 - Transpac tries to fairly handicap ALL entrants.
 - Uses ORR (Offshore Racing Rule) VPP based rule.
 - Calculates boat performance at range of wind speeds and angles.
 - Time-on-Time scoring to partially self-adjust for light and heavy weather years.
 - TPYC performed extensive studies to determine typical wind speeds & angles for the race.
 - Early years through on board logs.
 - Then, automatically saved numeric logs from Expedition, etc.
 - Most recently independent NOAA historic weather files. GRIB data 1999 - 2017

Transpac Handicapping Wind Matrix

Rated Conditions

TWA	TWS 6	TWS 8	TWS 10	TWS 12	TWS 14	TWS 16	TWS 20	TWS 24	Check Sum
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.007	0.011	0.000	0.000	0.008	0.000	0.001	0.000	0.027
10	0.011	0.011	0.003	0.004	0.008	0.000	0.000	0.000	0.038
15	0.011	0.013	0.011	0.011	0.009	0.000	0.002	0.000	0.057
20	0.016	0.021	0.018	0.018	0.012	0.000	0.005	0.000	0.090
25	0.043	0.031	0.021	0.019	0.013	0.000	0.008	0.000	0.135
30	0.083	0.046	0.028	0.022	0.013	0.002	0.007	0.000	0.201
35	0.099	0.075	0.057	0.050	0.031	0.009	0.011	0.000	0.333
40	0.093	0.125	0.118	0.120	0.086	0.029	0.026	0.000	0.596
45	0.135	0.195	0.198	0.205	0.157	0.062	0.054	0.010	1.017
50	0.283	0.280	0.278	0.268	0.206	0.104	0.091	0.035	1.546
55	0.415	0.342	0.337	0.301	0.218	0.150	0.132	0.058	1.952
60	0.391	0.342	0.353	0.311	0.213	0.192	0.172	0.062	2.036
65	0.275	0.297	0.331	0.305	0.211	0.225	0.208	0.059	1.911
70	0.176	0.257	0.294	0.288	0.214	0.246	0.237	0.071	1.781
75	0.131	0.240	0.261	0.263	0.218	0.252	0.258	0.098	1.722
80	0.125	0.227	0.245	0.246	0.226	0.247	0.271	0.125	1.711
85	0.140	0.210	0.253	0.257	0.238	0.238	0.276	0.135	1.746
90	0.159	0.207	0.274	0.288	0.255	0.239	0.274	0.117	1.814
95	0.169	0.233	0.297	0.318	0.265	0.258	0.285	0.071	1.897
100	0.172	0.272	0.322	0.341	0.260	0.292	0.343	0.034	2.037
105	0.171	0.298	0.358	0.392	0.299	0.341	0.459	0.037	2.356
110	0.163	0.326	0.427	0.506	0.517	0.447	0.541	0.050	2.978
115	0.142	0.401	0.567	0.689	0.964	0.707	0.525	0.028	4.023
120	0.113	0.499	0.770	0.934	1.200	1.151	0.485	0.000	5.152
125	0.090	0.493	0.896	1.201	1.253	1.438	0.581	0.000	5.954
130	0.078	0.349	0.823	1.420	1.561	1.627	1.152	0.000	7.010
135	0.070	0.184	0.623	1.486	2.028	2.434	1.704	0.101	8.631
140	0.058	0.087	0.407	1.264	1.997	2.743	2.015	0.278	8.849
145	0.043	0.044	0.236	0.863	1.634	2.397	1.913	0.405	7.536
150	0.030	0.024	0.137	0.565	1.251	2.020	1.639	0.377	6.042
155	0.018	0.016	0.088	0.391	0.962	1.753	1.409	0.259	4.897
160	0.010	0.013	0.059	0.293	0.766	1.499	1.209	0.174	4.023
165	0.005	0.012	0.042	0.242	0.623	1.224	1.043	0.160	3.351
170	0.003	0.012	0.049	0.219	0.497	0.980	0.922	0.168	2.850
175	0.002	0.012	0.067	0.199	0.362	0.761	0.810	0.152	2.366
180	0.000	0.010	0.045	0.136	0.206	0.381	0.463	0.092	1.334
TWA	6	8	10	12	14	16	20	24	100.00
Check Sum	3.931	6.219	9.294	14.435	18.981	24.450	19.532	3.157	100.00



Transpac Rated Conditions

- Most of Course, 58% of Distance, rated for 14-20 TWS
- 50% of Course rated with TWA 135-180
- 4% of Course rated with TWS <10 and TWA < 75
- In other words moderate air offwind performance has a large impact on rating.
- Light air upwind/jib reaching has small influence on rating.
- Or, probably won't save much rating to rate with small jibs but could be vulnerable to light air in first 100 miles.
- Consider how big of spinnaker your boat will actually use. If on small spinnaker, might be "paying" excess rating.
- To know for sure, run ORR Trial Certificate; not expensive considering cost of sails.

ORR Rating – More Preparation

- Sign up on US Sailing Web Site.
- If boat is faster than SC 50, needs full measurement.
- If slower can have some owner supplied data but independent measurer data almost always results in more favorable handicap.
- Sails measured by certified sailmaker: main, large jibs & headsails, spinnakers.
- Hull & appendages – if standard boat, likely on file. Otherwise measurer verified designer file or laser scan. Check appendages, propeller, etc.
- Flotation measurement – Boat measured empty – Freeboards and Righting Moment. Actual weighing is to your benefit. Measurement inventory including raft.
- From flotation, computer model is sliced to determine wetted surface, displacement, draft, sailing length, etc.
- Righting moment determines center of gravity which is then used to calculate sailing trim sail carrying ability.

ORR Choices for 2021

- **Sail Sizes** – Usual historical choices for speed/rating trade of extra spinnaker area, more or less mainsail roach, size of largest jib?
- **Sail Types**
 - Asymmetrical or symmetric spinnakers – Most boats benefit from speed advantage of asymmetrical spinnakers. Some boats, such as Cal 40's, which sail with the apparent wind well aft can have a rating advantage carrying just symmetric spinnakers.
 - Large Roach Headsails – New sails, primarily for tight reaching, with mid width between a spinnaker and jib were allowed for 2019 and later with rating assessment. Spinnakers must have mid width at least 75% of foot length. Jibs with LP > 110% of foretriangle base (J) must have mid with less than 50% of LP. LRH's or "tweeners" can be effective reaching headsails with rating hit.
- **Leeward Whisker Poles or Outriggers.** – Transpac allows monohulls to rate with jibs sheeted to a leeward whisker pole or outrigger with a rating assessment for the increased jib reaching performance. ORR characterizes the rating assessment as "at the upper end of the maximum potential performance benefit".

Measurement

- Deadline for ALL information is May 31, 2021. 10 minutes elapsed time penalty for each day late!
- Three measurers in So Cal; One in Nor Cal. Schedule early. All have other jobs since even 100 boats/year won't pay the rent.
- Prepare as requested with sails removed, tanks empty, all other gear removed.
- Flotation and inclining measurements must be performed with no wind or waves, so usually at dawn.
- If you want professional assistance or consulting start early.

Send It!

- Reliable, prepared boat.
 - Rudder, keel, rig, sails.
 - Enables crew to spend their energy sailing vs. fixing.
- Optimized Rating
 - Weighed to get credit for what the boat is.
 - Sails measured so not rated for larger than using.
 - Logical decisions on LRH & whisker pole/outrigger.
 - Recognize conditions affecting rating from wind matrix.
- Arrive Diamond Head
 - Safely
 - Full Race Mode
 - Having Fun!





Transpac 2021 Boat Inspection

inspections@transpacyc.com

Boat Inspection - Goal

- **USSER 1.1** The Safety Equipment Requirements establish uniform minimum equipment and training standards for a variety of boats racing in differing conditions. These regulations do not replace, but rather supplement, the requirements of applicable local or national authority for boating, the Racing Rules of Sailing, the rules of Class Associations, and any applicable rating rules.
- **USSER 1.2** The safety of a boat and her crew is the sole and inescapable responsibility of the "person in charge", as per RRS 46, who shall ensure that the boat is seaworthy and manned by an experienced crew with sufficient ability and experience to face bad weather. S/he shall be satisfied as to the soundness of hull, spars, rigging, sails and all gear. S/he shall ensure that all safety equipment is at all times properly maintained and safely stowed and that the crew knows where it is kept and how it is to be used.

Boat Inspection – Goal (cont.)

- **USSER 1.3** A boat may be inspected at any time by an equipment inspector or measurer appointed for the event. If she does not comply with these regulations, her entry may be rejected or she will be subject to a protest filed by the RC. A Violation of the SERs may result in a penalty other than disqualification.
- **RRS 46: PERSON IN CHARGE.** A boat shall have on board a person in charge designated by the member or organization that entered the boat.
- **Transpac Inspection** is a courtesy inspection to help boat owners meet their NOR, US Sailing SER and USCG responsibilities.

Safety Regulations

- **Transpac 2021** is run under the auspices of various regulatory entities:
 - **Transpacific YC** – Organizing Authority (OA) with regulations provided via NOR, SI and various amendments.
 - **US Sailing** – the operating entity for World Sailing, providing the RRS 2021-2024 and SER 2021 for the TP2021 race. The race is considered Ocean (SER 1.1).
 - **US Coast Guard** – The US marine regulatory agency under which all US marine activity operates. This includes extension to the International Rules of the Road, 72 COLREGS.

Process/Schedule

- Entry fee paid in full
- Inspector assigned
- Schedule appointment with Inspector:
 - After March 1st (NOR says May 1)
 - Initial Inspection shall be completed no later than seven days prior to start
 - Deadline for Safety Inspection corrections is two days prior to start
- Day of Inspection:
 - Copy of current USSERs and NOR + amendments on board
 - All equipment on board and laid out in order of the above
- Defect Follow-up:
 - It is the PIC's responsibility to follow-up,
NOT THE INSPECTORS!
- Certificates and documentation:
 - ORR Certificate, signed (send to Entry)
 - Life raft, current certificate of inspection valid for dates of race
 - MOM, Dan Buoy, current certificate of inspection valid for dates of race
 - Methods of steering the boat with rudder disabled, document
 - MOB practice with 2/3 of crew, hoisting MOB aboard, certificate
 - Coastal Safety at Sea Certificate for 30% of crew including person in charge, certificates and/or print out from US Sailing
 - Ocean Safety at Sea Certificate, for 30% of crew including watch captains, certificates and/or print out from US Sailing
 - CPR and First Aid training, at least two crew members, certificates
 - Anchor manufacturer's recommendations for yacht, ORR equipment list when rated
- Finish Line Inspection

Items for further discussion:

- PFDs (with crotch or leg straps, whistle, waterproof light), safety harnesses and tethers – all on board for inspection, regularly check for air retention
- Navigation lights, second set, tricolor + deck lights, or handheld with spare batteries, must meet USGC requirements (sidelights and stern light, 2nm)
- Fire extinguishers, at least Two (2) B-1 up to 20m (65.6'), no fewer than required by country of registry
- Sound making device, whistle, + bell if over 20m (65.6')
- SOLAS red hand flares (4), orange smokes (2), valid for dates of race
- Lifesling or equivalent, with self igniting light
- Permanently installed VHF and handheld VHF, both with DSC and MMSI number
- Ability to electronically trigger/record MOB within 10 seconds
- Searchlight, watertight, high-powered
- First aid kit and first aid manual, suitable for passage and number of crew
- Sails:
 - Main, 10% reef
 - Trysail, or Main with 50% reef (new in 2020 SER)
 - Heavy weather jib
 - Storm jib, highly visible material, alternate means of attachment to headstay
- Life raft, launch within 15 seconds, if valise, 88 lbs. or less
- Sat phone, on 24/7, connected to main battery, or have a spare battery

Boat/Race Preparation – a 1 year program

- **July 2020** Decide to go to Hawaii, and secure a boat!
- Sept-Oct 2020 Optimize your boat with boat & sail designers
- Oct-Dec 2020 Complete any major construction- rig/blades/hull
- Oct/Nov 2020 Place new sail orders, with specific due dates (follow up!)
- Dec 2020 Key crew signed and majority of players onboard (plan on fallout)
- Jan-Feb 2021 Updated ORR certificate
- Jan-Mar 2021 Crew training (SAS/FirstAid-CPR/MOB/Emergency Steering/etc.)
- Feb-June 2021 Crew practice/races (Islands/Cabo/Ensenada/SoCal300)
- Jan-June 2021 Inspection (pre-inspection and actual inspection)
- June 2021 Convert boat to offshore race mode
- **July 2021** You're off!



Modern Marine Communications

Eric Talman

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Sail Selection and Strategy

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Conclusion