



**91st Annual SCYA  
Midwinter Regatta  
SWYC/CRA PHRF Fleet  
San Diego, California  
Saturday, February 15-16  
2020**



## SAILING INSTRUCTIONS

Regatta Co-Chairs:	Ian Trotter	<a href="mailto:ian@chulavistaphoto.com">ian@chulavistaphoto.com</a>
	Colleen Cooke	<a href="mailto:sailorcookie@cox.net">sailorcookie@cox.net</a>
Principal Race Officer:	Colleen Cooke	<a href="mailto:sailorcookie@cox.net">sailorcookie@cox.net</a>
Protest Chair:	Ryan Georgianna	<a href="mailto:Protests@southwesternyc.org">Protests@southwesternyc.org</a>
Race Management Chair:	Keith Robertson	<a href="mailto:keith@johnsonandjennings.com">keith@johnsonandjennings.com</a>

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### 1. RULES

- 1.1. The Series will be governed by the *rules* as defined in *The Racing Rules of Sailing (RRS)* except US Sailing Prescriptions to Rules 63.2 and 63.4 will not apply.
- 1.2. RRS Appendix T: Arbitration, Appendix V1: Penalty At The Time Of An Incident, and Appendix V2: Penalty Taken After A Race, will apply.
- 1.3. RRS 55 is changed by adding the following sentence to the rule: "However, discarding biodegradable bands when setting a sail is permitted." Racers remain responsible for compliance with all applicable state and federal laws.
- 1.4. The notation [DP] in a rule in the NoR or SI means that the penalty for a breach of that rule may, at the discretion of the protest committee, be less than disqualification. This modifies RRS 64.1.
- 1.5. All racers shall adhere to the defined [Naval Protection Zone](#).
- 1.6. Per RRS 42.3(h), competitors may use an engine or other propulsion method to avoid situations in 1.5 provided they gain no significant advantage in the race.
- 1.7. Sailing Instructions 1.3, 1.4, 7.4, 9.3, 11.3, 11.6, 12.2, 16.2, 16.3, 17.1, 19.3, and 19.6 modify the RRS.

### 2. NOTICE TO COMPETITORS

- 2.1. Notices to competitors will be posted on the online Notice Board located at the [SCYA Midwinter Regatta – SWYC/CRA](#) event website.

### 3. CHANGES IN SAILING INSTRUCTIONS

- 3.1. Ashore: Any change in the Sailing Instructions will be posted on the [Notice Board](#) on the event web site prior to 0900 on the day it will take effect.
- 3.2. Afloat: In accordance with RRS 90.2 (c), oral changes to the Sailing Instructions may be made on the water. A change is in effect when the RC signal boat displays code flag L over A with one sound signal. This means come within hail of the RC boat to receive the oral changes to the Sailing Instructions.

## 4. SCHEDULE OF RACES

4.1. The races are scheduled as follows.

<u>RACE</u>	<u>DATE</u>	<u>TIME OF FIRST WARNING</u>
1	2/15/20	1155
2	2/15/20	Immediately following Race 1
3	2/16/20	1155
4	2/16/20	Immediately following Race 3

## 5. CLASSES, CLASS FLAGS AND STARTING ORDER

5.1 CRA 2020 Class Breaks will be used. A numeral pennant, matching the class, must be flown from the backstay of all boats while checking in, while racing, and while finishing.

5.2 CRA 2020 class breaks are as follows:

<b>Class</b>			<b>Pennant</b>
Class 1	PHRF Spinnaker	RLC of -999 to -1	#1
Class 2	PHRF Spinnaker	RLC of 0 to +75, where PF $\geq$ 4.0	#2
Class 3	PHRF Spinnaker	RLC of 0 to +75, where PF < 4.0, RLC of +76 to +86, RLC of +87 to +140 with LOA $\geq$ 42' and PF < 4.0	#3
Class 4	PHRF Spinnaker	RLC of +87 to +140 with LOA < 42'	#4
Class 5	PHRF Spinnaker	RLC of +141 to +999	#5
Class 6	Non-Spin	All Ratings	#6
Class 8	Multi-hulls	All Ratings	#8

5.3 The starting order will be in numeric class order: 1, 2, 3, 4, 5, 6, 8. The RC may cancel or combine starts. It is the responsibility of a boat to start at her signaled start time.

## 6. ENTRIES AND CHECK-IN

6.1. All eligible boats will have entered on-line no later than 6:00pm on Friday, Feb. 14, 2020, at [SCYA Midwinter Regatta – SWYC/CRA](#).

6.2. Eligible yachts complete their entry by checking in with the RC boat prior to the first warning signal. Yachts checking in shall pass the RC boat to starboard, hail her sail number and class, and receive RC acknowledgement. Check-In will commence when the "L" flag is hoisted. Visual and radio check-in (VHF 68) are acceptable until the first Warning Signal. Visual check-in may continue after the first warning at the sole discretion of the R/C (but not within one minute of any start).

## 7. RACING AREAS

7.1. The Ocean Racing Area will be in the Coronado Roads. The starting area will be approximately 1.5 nautical miles from Zuniga Light "Z" on an approximate compass bearing of 95° magnetic.

7.2. The Bay Racing Area will be in the North San Diego Bay with the starting line in the vicinity of the ½ mile marker mid-Harbor Island.

7.3. If, in the judgment of the RC, weather conditions or sea state in the Ocean Racing Area on Saturday make racing in the ocean undesirable, the RC may move the race to the Bay Racing Area. If the Bay Racing Area is to be used on Saturday, the RC boat will display Code Flag "L" as it proceeds to the Bay Racing Area and the change will be announced repeatedly on VHF Channel 68. The change will also be posted on the online [Notice Board](#) at the event website.

- 7.4. Failure of a yacht to hear Racing Area change broadcast over VHF or to note change on the Notice Board is not grounds for redress. This modifies RRS 62.1(a).
8. COURSE(S)
- 8.1. Courses for the Ocean Racing Area shall be windward-leeward and will be selected from the attached course diagrams marked as Attachment A.
- 8.2. For the Ocean Racing Area, no later than the warning signal for each class, the RC boat will signal the course number, approximate compass bearing, and distance to Mark 1 by placards as illustrated in Attachment A.
- 8.3. For the Bay Racing Area, the course numbers will be displayed on course boards displayed from the RC boat indicating the course to be used as described in Attachment B.
9. MARKS
- 9.1. For the Ocean Racing Area, the windward mark shall be an orange tetrahedron buoy located on the approximate compass bearing displayed from the RC boat. The leeward mark shall be an orange tetrahedron buoy located approximately 200 yards to windward of the start line. The windward and leeward marks shall be rounded to port.
- 9.2. For the Bay Racing Area, all marks will be channel buoys or tetrahedron buoys, as designated in Attachment B. All marks listed are considered rounding marks.
- 9.3. The use of an autonomous mark will not be grounds for redress. Routine movement of autonomous marks will not be grounds for redress. This includes minor readjustments and marks returning to station after having been pushed away by a competitor. This modifies RRS 62.1(a).
10. CHANGE OF COURSE AFTER THE START
- 10.1. To change the next leg of the course in the Ocean Racing Area, the RC will lay a new yellow tetrahedron buoy and will remove the original orange mark as soon as practicable. Any mark to be rounded after rounding the new mark may be relocated to maintain the original course configuration.
- 10.2. In the Ocean Racing Area, the RC may change the next leg of the course for individual classes using class flags.
- 10.3. In the Ocean Racing Area, when in a subsequent change a new mark is replaced, it will be replaced by an original mark.
11. THE START
- 11.1. The race will be started in accordance with RRC 26. As a courtesy, one minute prior to the first warning the R/C may sound 4 horn blasts.
- 11.2. The starting line for Ocean Racing Area will be between 100 and 200 yards leeward of the leeward mark. The starting line will be between a staff displaying an orange flag on the RC boat at the starboard end and a yellow tetrahedron mark at the port end.
- 11.3. The starting line for the Bay Racing Area will lie between a staff with an orange flag on the RC vessel and an inflatable buoy or autonomous mark ("A" Mark) near the RC boat. After properly starting, a boat shall not sail through the "Starting Line" or "Finishing Line" unless actually finishing. This ranks as an obstruction for the purposes of Part 2 of the RRS. Skippers in violation of this paragraph shall be subject to a DSQ imposed by the RC without benefit of a hearing. This modifies RRS 63.1, A4 and A5. *However, when either end of the line*

*as defined is removed, there is no line and therefore no obstruction exists!*

- 11.4. A distance buoy may be streamed aft of the RC boat and if present shall be considered part of the RC boat.
  - 11.5. Yachts whose warning signal has not been made shall avoid the starting area during the starting sequence for other classes. Otherwise, this may be seen as a breach of RRS 24.1. [DP]
  - 11.6. A boat starting later than 5 minutes after her starting signal will be scored Did Not Start (DNS) without a hearing. This changes RRS 63.1, A4 and A5.
12. RECALLS
- 12.1. Individual recalls shall be signaled in accordance with RRS 29.1.  
The RC may attempt to notify premature starters either by loud hailer or VHF Channel 68. It is the responsibility of each yacht to start properly.
  - 12.2. Failure of electronic equipment, failure to hear a hail, order of hail, or delay in hailing will not be grounds for redress. This modifies RRS 62.1(a).
  - 12.3. A RC assist vessel may be stationed near the Pin Buoy end of the starting line and is also authorized to identify and hail premature starters.
13. WITHDRAWAL
- 13.1. A yacht that retires from the race must notify the RC before leaving the course. Failure to do this may result in disqualification from this race and possible rejection of entry for subsequent club races. Informing the RC vessel can be accomplished by either (a) sailing (motoring) past the RC vessel OR (b) radioing the RC vessel (VHF 68). If the RC vessel does not answer, leave the information with another race participant to avoid punitive action, or keep trying.
14. FINISH
- 14.1. In the Ocean Racing Area, when finishing to leeward, the finish line will be between the course side of a yellow tetrahedron buoy and a staff displaying an orange flag on the RC boat, leaving the RC boat to starboard. Should the buoy not be present, yachts are to pass close (within 30 yards) to the RC boat leaving the RC boat to starboard.
  - 14.2. In the Ocean Racing Area, when finishing to weather, the finish line will be approximately 100 yards beyond the weather mark. The finish line will be between the course side of a yellow tetrahedron buoy and a staff displaying an orange flag on the RC boat on station at the finish line, leaving the RC boat to starboard. Should the buoy not be present, yachts are to pass close (within 30 yards) to the RC boat leaving the RC boat to starboard.
  - 14.3. In the Bay Racing Area, the Finish Line will lie between an Orange Flag onboard the RC boat and a nearby buoy ("A" Mark). In the event that the "A" mark is missing, boats may finish by passing on either side of the RC, within 3 boat lengths. Boats finishing during a "Start Sequence" may elect to finish within 2 boat-lengths distance outboard of the Pin End buoy or the RC boat.
15. PENALTY SYSTEM
- 15.1. RRS V1, Penalty at the Time of the Incident, shall apply: *"The first two sentences of Rule 44.1 are changed to: 'A boat may take a One-Turn Penalty when she may have broken one or more rules of Part 2 or Rule 31 in an incident while racing. However, when she may have broken one or more rules of Part 2 while in the zone around a*

*mark other than a starting mark, her penalty shall be a Two-Turns Penalty.”*

- 15.2. RRS V2, Penalty Taken After a Race, shall apply: “*After a race, a boat that may have broken one or more rules of part 2 or Rule 31 in an incident while racing may take a Post-Race Penalty for that incident. A boat takes the penalty by delivering a written notice to a race officer that identifies the race number and when and where the incident occurred. The penalty shall be a 30% Scoring Penalty, calculated as stated in rule 44.3(c). However, rules 44.1(a) and (b) apply, and the penalty shall not be taken after a protest hearing involving the incident has begun.*”
16. TIME LIMIT
  - 16.1. If no boat in a class has finished by 1600 on the day of the race, the race will be abandoned for that class.
  - 16.2. Yachts failing to finish within 30 minutes after the first yacht of their class finishes will be scored “Did Not Finish” (DNF). This modifies RRS 35, A4 and A5.
  - 16.3. Boats not finished by 1630 will be scored DNF for that race. This modifies RRS 35, A4 and A5.
17. PROTESTS
  - 17.1. *RRS 61 is modified to add this additional requirement: A boat intending to protest shall report her intentions and the boat(s) being protested to the R/C boat on station upon finishing or retiring and obtain R/C acknowledgment. Radio reports of protests are only accepted from boats that retire from the race.*
  - 17.2. Protesting yachts shall lodge their protest or redress request either by emailing the Protest Chair at [protests@southwesternyc.org](mailto:protests@southwesternyc.org), or giving their hand-written protest or redress request to a representative of the Race Committee at the post race meeting area. Protests shall be filed no later than 60 minutes after the RC boat docks. The Protest Time Limit will be posted on the online [Notice Board](#) for this event. The Protest Committee may extend this time if there is good reason to do so.
  - 17.3. Notice of protest and yachts involved and the schedule of hearings will be posted on the online [Notice Board](#) within 30 minutes of the expiration of the protest time. This posting constitutes the notice required by RRS 63.2, Time and Place of the Hearing.
  - 17.4. Protests will be heard in the approximate order of receipt as soon as possible after the day’s racing is complete, or at a later date, at the option of the Protest Committee.
18. PROTEST ARBITRATION
  - 18.1. An arbitration meeting may be held prior to a protest hearing according to Appendix T for breaches of the rules of Part 2 or rule 31 where there is no damage or injury, if a USSA Certified Judge is available. Protests not resolved through arbitration will be referred to the Protest Committee for a hearing.
19. SCORING
  - 19.1. One race is required to be completed to constitute a regatta.
  - 19.2. Ratings used to score this regatta will be the PHRF Southern California Area G ratings as determined and supplied by PHRF San Diego.
  - 19.3. Each boat’s score shall be the total of her race scores. No score will be excluded. This modifies RRS Appendix A2.
  - 19.4. For the Ocean Racing Area, the PHRF “Buoy” ratings will be used for scoring windward/leeward races.
  - 19.5. For the Bay Racing Area, PHRF “RLC” ratings will be used as the default for

scoring all races. However, the PRO may elect, on a race-by-race basis for each class, to use the "Buoy" ratings, should conditions permit. Courses signaled with a "B" designation will indicate buoy ratings are expected, but the final decision will be determined based on actual race conditions. PHRF non-spinnaker offsets will not be used for scoring.

- 19.6. The PRO's decision regarding the rating assigned will not be grounds for redress. This modifies RRS 62.1 (a).
20. RESPONSIBILITIES, SAFETY & PERSONAL FLOTATION:
- 20.1. Yachts racing in the San Diego Bay encountering non-racing vessels shall conform to the inland rules of the road. No vessel has the right of way over a large ship in the channel.
- 20.2. If the Race Committee boat is damaged as a result of a boat breaking a rule, that boat shall pay for the repairs.
- 20.3. Notwithstanding any safety requirements, the ultimate safety of a boat and her crew is the sole and inescapable responsibility of the owner or charterer. He/she must do his/her best to ensure that the boat is fully sound, thoroughly seaworthy and manned by an experienced crew who are physically fit to face bad weather. He/she must be satisfied as to the soundness of hull, spars, rigging, sails and all gear. He/she must ensure that all safety equipment is properly maintained and stowed, and that crewmembers know where it is stowed and how it is used.
- 20.4. After the starting sequence is complete, the R/C vessel will make every attempt to monitor VHF channel 68. **In an emergency, contact the USCG on VHF 16 immediately.**
21. RADIO COMMUNICATION
- 21.1 The Race Committee will monitor VHF Ch.68 for radio traffic regarding the regatta. Please contact them to notify the Race Committee of a boat's intent to withdraw from racing per 9.3.
- 21.2 Except in an emergency, a boat that is racing shall not make voice or data transmissions and shall not receive voice or data communication that is not available to all boats. this restriction also applies to mobile phones. [DP]
- 21.3 **In the event of an on-the-water emergency, contact the US Coast Guard on VHF Channel 16 immediately.**
22. RACE RESULTS AND AWARDS
- 22.1. SWYC invites all participants to enjoy the facilities and hospitality of the club after racing each day for refreshments and re-hashing of the day.
- 22.2. Race results will be announced at the after race party on Sunday, Feb 16, and posted at [SCYA Midwinter Regatta – SWYC/CRA](#).
- 22.3. The awards ceremony will be held after the races on Sunday, February 16<sup>th</sup>, 2020, at SWYC.
- 22.4. Regatta prizes will be awarded using the listed procedure: one prize in each class of 2 - 4 boats, two prizes for 5 - 7 boats, three prizes for 8 or more, based on the number of starters in the class.
23. DISCLAIMER OF LIABILITY
- Sailing is an activity that has an inherent risk of damage and injury. Competitors in this event participate entirely at their own risk. See RRS 4, Decision to Race. The race organizers (CRA, SWYC, race committee, protest committee, host club, sponsors, or any other organization or official) will not be responsible for damage

to any boat or other property or the injury to any competitor, including death, sustained as a result of participation in this event. As a condition of their participation in this regatta, competitors release all claims they may have against CRA and SWYC and its officers, directors, members, committees and employees for damage to property, personal injury or death sustained in conjunction with or prior to, during or after the regatta. Competitors shall be responsible for damage or injury caused by their breach of The Racing Rules of Sailing or applicable governmental rules for the avoidance of collision.

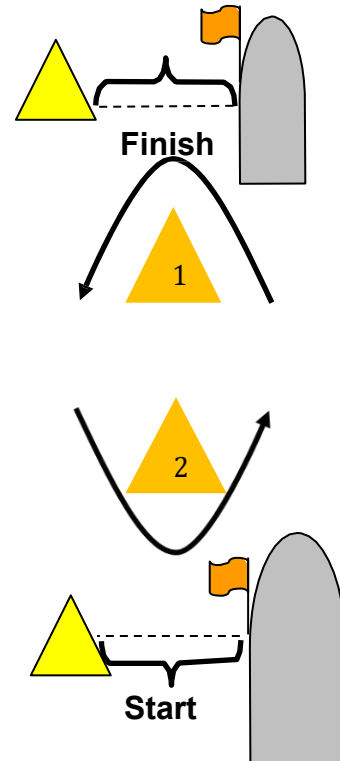
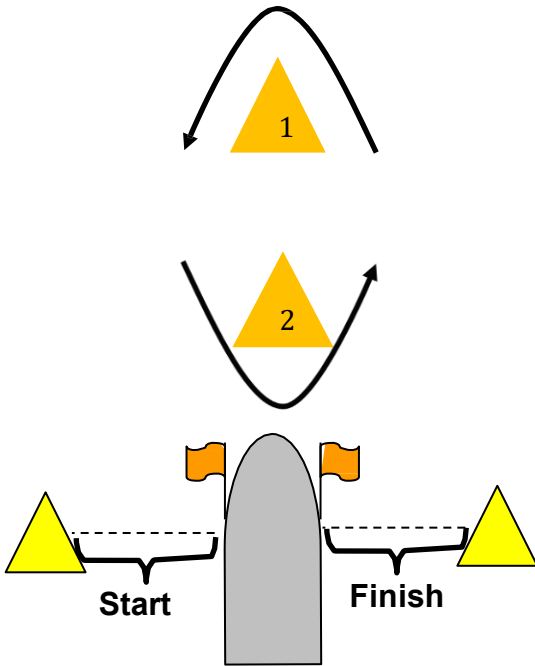
24. FURTHER INFORMATION

- 24.1. Event Co-Chairs: Ian Trotter [ian@chulavistaphoto.com](mailto:ian@chulavistaphoto.com)  
Colleen Cooke [sailorcookie@cox.net](mailto:sailorcookie@cox.net)



## Attachment A – Ocean Courses

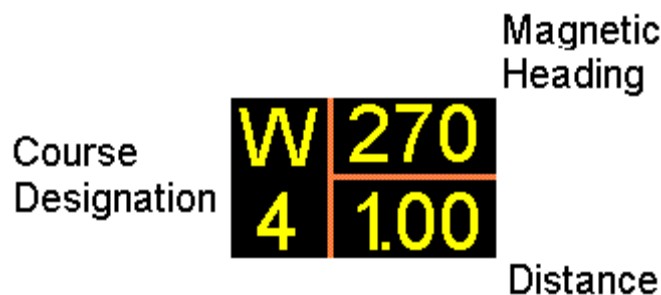
<i>Course *</i>	<i>Marks</i>	<i>Course **</i>	<i>Marks</i>
W2	Start, 1, Finish	W3	Start, 1,2, Finish
W4	Start, 1,2,1, Finish	W5	Start, 1,2,1,2, Finish
W6	Start, 1,2,1,2,1, Finish	W7	Start, 1,2,1,2,1,2, Finish
W8	Start, 1,2,1,2,1,2,1, Finish	W9	Start, 1,2,1,2,1,2,1,2, Finish



\* When the start and finish is behind the leeward mark the distance between the leeward mark and start/finish will be added to the total distance for courses W2, W4, W6, and W8 for the purpose of scoring.

\*\* When the start is behind the leeward mark and the finish is beyond the windward mark, these distances will be added to the total distance for courses W3, W5, W7, and W9 for the purpose of scoring.

### Course, Heading, & Distance Placard Illustration





**ATTACHMENT B – BAY COURSES**

All races start and finish at "A". Marks are to be rounded to port unless they are followed by "s". Marks followed by "s" are to be rounded to starboard. Distances are calculated from current charts and are subject to change due to occasional buoy repositioning by the US Coast Guard.

Course #	Marks						Handicap Distance	Course #	Marks						Handicap Distance
1	X	21					2.0	68	20	24	Z			5.8	
2	X	20	21				2.2	69	20	FM19	20	23	Z	6.9	
3	X	FM19					2.4	70	20	26	Z				8.6
4	X	20	FM19				2.6	71	20	26A	Z				9.3
5	X	19	21	FM19			3.2								
6	X	Z					3.4	72	X	18	Z				4.3
7	X	FM19	20	21			3.8	73	X	14	Z				6.9
8	X	22					3.9	74	X	16A	Z	X	Z		9.0
9	X	21	X	21			4.0	75	X	9	Z				9.4
10	X	20	22	FM19			4.2	76	X	9	22	Z			10.3
11	X	22	Z				4.4	77	X	11	Z	X	Z		11.8
12	X	20	FM19	X	21		4.6	78	X	11	FM19	X	Z		10.9
13	X	FM19	X	FM19			4.8	79	X	5	Z				11.9
14	X	23					5.1	80	X	5	22	Z			12.9
15	X	23	FM19				5.3	81	X	9	Z	X	Z		12.8
16	X	23	Z				5.5	82	X	18	22				4.8
17	X	24					5.8	83	X	18	24				6.7
18	X	Z	X	FM19			5.8	84	X	16A	22	X	Z		9.4
19	X	24	FM19				5.9	85	X	18	26				9.5
20	X	24	Z				6.3	86	X	16A	24	X	Z		11.2
21	X	20	Z	X	Z		7.1	87	X	16A	26	X	Z		14.0
22	X	FM19	X	Z	X	FM19	8.2	88	X	16A	28	X	Z		15.3
23	X	26					8.6								
24	X	Z	X	Z			8.6	89	X	22	18	21			6.4
25	X	26	FM19				8.7	90	X	22	X	Z			7.3
26	X	26	Z				9.1	91	X	22	Z	X	Z		7.8
27	X	Z	X	FM19	X	Z	9.3	92	X	22	X	22	Z		8.2
28	X	Z	X	Z	X	Z	10.3	93	X	24	18	21			8.2
								94	X	24	X	Z			9.1
29	19	21					2.7	95	X	24	Z	X	Z		9.6
30	19	FM19					3.1	96	X	24	X	22	Z		10.0
31	19	Z					4.1	97	X	26	18	21			11.0
32	19	21	X	21			4.6	98	X	24	X	24	Z		10.8
33	19	22	Z				5.1	99	X	26	X	Z			11.9
34	19	21	19	21			5.2	100	X	28	X	Z			13.2
35	19	FM19	X	FM19			5.5								
36	19	FM19	19	FM19			6.1	101	X	21	X				3.2
37	19	23	Z				6.2	102	X	FM19	X				3.6
38	19	24	Z				6.9	103	X	Z	X				4.7
39	19	Z	19	FM19			7.1	104	19	FM19	19				5.0
40	19	Z	X	Z			7.6	105	19	Z	19				6.1
41	19	Z	19	Z			8.2	106	X	17	X	16			6.7
42	19	26	Z				9.7	107	X	19	Z	16A			7.4
								108	X	15	X	16			7.9
43	18	FM19					3.2	109	X	18	Z	17			8.1
44	18	Z					4.1	110	X	18	24	Z	X		8.4
45	18	22	Z				5.1	111	X	20	Z	21	23	FM19	18
46	18	21	18	21			5.1	112	X	17	Z	17			9.9
47	15	FM19					5.8	113	X	15	Z	17			10.7
48	18	23	Z				6.2	114	X	15	Z	19	15		11.6
49	18	FM19	18	FM19			6.3								
50	17	22	Z				6.6	115	X	21	18				3.9
51	18	24	Z				6.9	116	X	22	X				5.1
52	17	FM19	19	FM19			7.6	117	X	23	X				6.3
53	15	22	Z				7.7	118	19	22	X	19			6.7
54	17	23	Z				7.7	119	19	23	19				7.6
55	18	Z	18	Z			8.1	120	19	24	19				8.3
56	17	24	Z				8.4	121	X	24	X	16A			9.1
57	17	FM19	17	FM19			9.1	122	19	26	X				10.5
58	18	26	Z				9.7								
59	17	Z	19	Z			9.7	123	20	21	18				3.4
60	17	26	Z				11.2	124	20	Z	20				3.8
61	17	Z	17	Z			11.2	125	18	FM19	X	18			5.3
62	20	21					1.5	126	16A	FM19	X	19			6.4
63	20	FM19					2.0	127	17	FM19	X	18			6.9
64	20	Z					3.0	128	17	21	17				7.6
65	20	FM19	20	FM19			3.8	129	18	Z	15				8.6
66	20	22	Z				4.0	130	17	Z	17				9.2
67	20	23	Z				5.1	131	15	Z	17				10.3

132	16A						3.2	179	FM19	X	Z						4.6
133	17						3.6	180	Z	X	Z						5.6
134	X	16					4.0	181	Z	19	Z						6.3
135	15						4.7	182	Z	X	18	Z					6.5
136	12						6.1	183	Z	X	16A	Z					7.4
137	10						7.2	184	Z	X	Z	X	FM19				8.0
138	11	14	9				8.9	185	Z	X	14	Z					8.9
139	5						9.8	186	Z	19	Z	19	Z				10.3
140	10	17	10				11.0	187	Z	17	Z	X	Z				11.3
141	5	9	5				12.3	188	Z	X	Z	X	Z	X	Z		12.5
142	5	11	5				13.4	189	Z	19	Z	19	Z	19	Z		14.4
143	FM19	X					2.4	190	21	X	21						2.7
144	FM19	19					3.1	191	21	19	21						3.3
145	Z	X					3.4	192	22	X	21						4.6
146	Z	19					4.1	193	22	19	21						5.3
147	Z	X	FM19	X			5.8	194	23	X	21						5.8
148	Z	X	Z	X			6.9	195	24	X	21						6.5
149	Z	19	Z	19			8.2	196	24	19	21						7.1
150	Z	X	FM19	19	FM19	19	9.5	197	24	22	23	X	21				7.7
151	Z	X	Z	X	Z	X	10.3	198	24	22	24	X	21				8.4
152	Z	19	Z	19	Z	19	12.3	199	26	X	21						9.3
								200	26A	X	21						10.0
153	21	X					2.0	201	26A	19	21						10.6
154	21	19					2.7	202	28	19	21						11.2
155	22	X					3.9										
156	22	19					4.6	203	22	Z							3.2
157	23	X					5.1	204	22	Z	X	21					5.2
158	24	X					5.8	205	22	FM19	19	21					5.4
159	24	19					6.5	206	21	FM19	X	21	FM19	X	21	FM19	6.1
160	24	22	23	X			6.9	207	FM19	19	21	19	21				6.3
161	24	22	24	X			7.6	208	22	FM19	X	21	X	21			6.8
162	26	X					8.6	209	22	X	22	Z					7.0
163	26A	X					9.3	210	24	Z	X	21					7.0
164	26A	19					9.9	211	22	Z	X	22	Z				7.5
165	28	19					10.6	212	22	X	22	21s	Z				8.0
								213	26	Z	X	21					9.8
166	21	20	FM19	20			3.4	214	24	X	Z	X	21				10.0
167	21	20	FM19	19			4.5	215	26	X	Z	X	21				12.8
168	FM19	19	21	19			5.6										
169	22	X	FM19	X			6.3	216	FM19s	22	Z						3.3
170	22	X	Z	X			7.3	217	FM19s	24							4.7
171	23	X	Z	X			8.5	218	22s	22A	Z	22A	22				5.7
172	24	X	Z	X			9.2	219	FM19s	22A	Z	22A	22				5.9
173	24	19	Z	X			9.8	220	FM19s	26							7.5
174	26	X	FM19	X			11.0	221	22s	22A	Z	22A	Z	22A	22		7.8
175	26	X	Z	X			12.0	222	FM19s	26A							8.1
176	26A	X	Z	X			12.7	223	FM19s	28							8.8
								224	FM19s	24	22	26					9.3
177	FM19	X	FM19				3.5	225	FM19s	28	22	24					10.6
178	FM19	19	FM19				4.1	226	FM19s	26	22	26					12.1

**Navigation Mark Descriptions:**

- "A" CRA YELLOW or ORANGE Inflatable, or ORANGE autonomous mark, South of the middle of Harbor Island
- "X" CRA YELLOW or ORANGE Inflatable, South of the west end of Harbor Island
- "Z" CRA YELLOW or ORANGE Inflatable, Southeast of the Embarcadero, near Star of India
- FM19 Cement Fleet Mooring Buoy, SSE of the east end of Harbor Island

**Navigation Buoys - (refer to NOAA Chart 18773):**

5	SD 5, green channel buoy	16A	SD 16A, red channel buoy	23	SD 23, green channel buoy
9	SD 9, green channel buoy	17	SD 17, green channel buoy	24	SD 24, red channel buoy
10	SD 10, red channel buoy	18	SD 18, red channel buoy	26	SD 26, red channel buoy
11	SD 11, green channel buoy	19	SD 19, green channel buoy	26A	SD 26A, red channel buoy
12	SD 12, red channel buoy	20	SD 20, red channel buoy	28	SD 28, red channel buoy
14	SD 14, red channel buoy	21	SD 21, green channel buoy	30	SD 30, red channel buoy
15	SD 15, green channel buoy	22	SD 22, red channel buoy		
16	SD 16, red channel buoy	22A	SD 22A, red channel buoy		