

**PHRF OF E.L.I.**  
**THE PERFORMANCE HANDICAP RACING FLEET OF EASTERN LONG ISLAND**  
POST OFFICE BOX 82, NEW SUFFOLK, NEW YORK 11956

April, 2013

Dear Fellow Sailor,

Enclosed with this letter you will find an application form to renew your membership in the Performance Handicap Racing Fleet of Eastern Long Island and receive your 2013 PHRF/ELI handicap rating. Most handicap racing at the club level as well as the handicap racing program coordinated by the Eastern Long Island Yachting Association utilize these ratings. So, if you plan to compete this year, please review the enclosed material, fill out the application blank and return it with your fee as soon as possible. Remember that all rating certificates are only valid for one year and automatically expire on April 30 of the following year. Even if you held a certificate last year, it must be renewed for your rating to be valid for the upcoming season.

In addition to a renewal application form, this letter also contains general information regarding the process by which ratings are generated, the rating appeals process, and the extent of your responsibilities as an owner or master. A summary of the definitions used in the rating process as well as the Rating Adjustment Tables used to adjust base boat ratings are included on a separate sheet.

The full content of this package is also available online and can be downloaded from the ELIYA website, [elisail.org](http://elisail.org). The Rating Application Form can be completed online but it is then necessary to print out a hard copy of the form and mail it, along with the appropriate fee to one of the handicappers listed on the back of the form.

**PHRF OF ELI**

The Performance Handicap Racing Fleet is composed of a group of monohull sailboats of varying performance characteristics that are handicapped for racing on the basis of observed performance rather than measured dimensions. It is the purpose of the PHRF system to handicap yachts of various classes or types on the basis of the potential speed of a well sailed, well maintained, and well equipped specimen of each type.

PHRF of ELI is administered by a Handicap Council composed of local sailors whose names are listed on the back of the Rating Application Form. The Council meets bi-monthly at 7:30 pm at the Shelter Island Yacht Club. Meetings are scheduled for the second Monday of a month and afford a public forum to hear appeals and review general regulations and individual ratings. Our goal is to increase the overall effectiveness and fairness of the performance handicapping

ratings are only intended to be used in races against other boats racing without spinnakers, not in classes that mix spinnaker and non-spinnaker boats.

The intent of non-spinnaker ratings is that boats sail off the wind with the same sails they use when sailing upwind. Therefore, yawls and ketches may not fly staysails off the wind unless such sails are used sailing upwind. When racing in the non-spinnaker classes, all jibs must be attached along their luff to the forestay.

**Proper Racing Trim** Yachts shall race as rated with at least all the equipment and furnishings supplied as standard by the manufacturer. Production boats with modifications to the standard hull, appendages, rig or interior as well as custom designed boats must be reported to the Handicap Council and will be rated on an individual basis. When racing, yachts not fitted with auxiliary power must carry aboard an outboard or other mechanical means of propulsion. Failure to do so will incur a six second per mile penalty.

It is the obligation of the owner or master of any production boat that has been modified to provide details of all changes made to the boat on the rating application. Examples of such changes would include any of the following:

- Keel Modifications (depth, shape, section, material, weight)
- Weight Change (relocation or elimination of bulkheads and joinerwork, reduction of standard equipment, etc.)
- Rudder modifications (type, shape, depth, etc.)
- Hull modifications (other than normal fairing)
- Rig Changes (sail plan changes, rig size, rig material, rigging material, chainplate locations, etc.)

PHRF ratings are based on the information supplied to the Handicap Council by the boat owner. In signing an application for a rating, or for the renewal of a rating, the owner attests to the completeness and accuracy of the information supplied.

## **APPEALS**

The PHRF ratings of all currently active boats are reviewed annually by the Handicap Council and adjusted where appropriate in light of new performance data and additional observation and experience. Additionally any PHRF member can appeal the current rating of any boat (including his own) to have it raised or lowered. Appeals must be submitted in writing and are heard by the Council as soon as possible at a regular meeting. Appeal decisions are voted upon at the meeting in which they were heard and become effective the following Saturday. Please contact the handicapper serving your local area to guide you through the appeal process.



system. All meetings are open to the public and we encourage your attendance and active participation.

The Council is firmly committed to establishing handicap ratings that are as fair and objective as possible. Ratings are based on demonstrated performance or, in the absence of local or regional race data, the projected performance of a well sailed boat, properly equipped for racing, sailing a circular random course (i.e. all points of sail) in 8 knots of true wind speed. It must be noted, however, that any handicap system has inherent limits of applicability and, when the system is applied beyond those limits, it will begin to yield race results of questionable fairness. By itself, no single rating system can ever compensate for inadequate or inappropriate course selections or division assignments.

### **PHRF OF ELI RATING BASIS**

In order to qualify for a handicap rating from PHRF of ELI, a boat must be a self-righting monohull sailed without the use of a trapeze, hiking boards or any other equipment specifically intended to support a body outboard of the sheerline. Wings that are a permanent and standard component of a boat's design are permitted. For purposes of handicapping, our ratings assume a boat is fully prepared and equipped for competitive racing (i.e. good sail inventory, clean bottom, etc.). Rating credits are not given for inadequate boat preparation nor are credits extended for the carrying of excessive or oversized cruising equipment or gear. Furthermore a boat's rating does not include a factor to account for the experience level of either skipper or crew. We handicap only the boat, assuming it to be sailed competitively.

**Base Boat Ratings** have been established for over 200 popular production models. All boats of a specific model are given the same Base Boat Rating. That rating assumes the boat has a standard (unmodified) hull, keel, rudder and rig and is equipped to the degree intended by its manufacturer (such as joiner work, bunks, galley, etc.) A Base Boat is also assumed to carry sails of a particular size and a minimum drag engine/propeller installation. To the extent an individual boat varies from any of these base assumptions, adjustments are applied to the Base Boat Rating to arrive at a specific rating for that boat.

**One Design Ratings (ODR)** are a refinement of Base Boat Ratings and have been established for boats of an organized one design class with published class rules. Boats that hold ODR ratings must carry only class legal sails and equipment. Class designated weight limits do not apply for PHRF racing. The One Design Rating incorporates any penalties or credits that would otherwise arise from adherence to the class rules.

**Non-Spinnaker Ratings** adjust a boat's base rating to compensate for the expected loss of performance when not flying a spinnaker. Each PHRF/ELI Certificate contains both spinnaker and non-spinnaker ratings. Non-spinnaker

## **SAIL MEASUREMENT LIMITATIONS**

PHRF/ELI regulations allow the base jib size to vary, generally following the designer's or manufacturer's intent. For boats designed to carry overlapping genoas, the base size is between 148% and 151% of J. For boats designed to carry non-overlapping or one-design sails, the base size is that specified by either the designer or the one-design class.

Jib adjustment credits are derived from a formula that relates a boat's gain (or loss) of driving power from its jib to the ease with which its hull is able to move through the water. Driving power is estimated by means of a modified SA/D ratio. Relative hull resistance is estimated by the D/L and B/L ratios. When multiplied together, these ratios determine a Jib Correction Factor (JCF). A table is then used to convert the JCF into a seconds per mile correction. The complete formula and table are included in Part II of the PHRF Regulations which is attached.

In the case of yachts not sailing with a one-design class rating (ODR), attention is directed to the following sail measurement limitations:

Mainsail headboards may not exceed in width the greater of 6 inches or 4% of E.

Mainsail girth limits are: upper girth (MGU) cannot exceed 38% of E and the mid-girth (MGM) cannot exceed 65% of E. Increases above these limits shall be stated as a percentage. This data can usually be obtained from your sailmaker.

Full batten mainsails are allowed without penalty so long as the roach of the sail has not been increased from the above limits.

A sail may not be measured or used as a jib unless its mid-girth does not exceed 50% of its foot length and the length of any intermediate girth does not exceed a value similarly proportionate to its distance from the head of the sail.

Best wishes for a successful and enjoyable season.

THE HANDICAP COUNCIL of PHRF/ELI



## PERFORMANCE HANDICAPS

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Performance handicaps are based on the speed potential of a boat, determined as far as possible on observations of previous racing experiences, both locally and regionally. It is the intent of PHRF handicapping that any well equipped, well maintained, and well sailed boat has a good chance of winning.

In order to qualify for a handicap rating from PHRF or ELI, a boat must be a self-righting monohull sailed without the use of a trapeze, hiking boards or any other equipment specifically intended to support a body outboard of the sheerline. Wings that are a permanent and standard component of a boat's design are permitted. For purposes of handicapping, ratings assume a boat is fully prepared and equipped for competitive racing (i.e. good sail inventory, clean bottom, etc.). Rating credits are not given for inadequate boat preparation nor are credits extended for the carrying of excessive or oversized cruising gear or equipment. Furthermore a boat's rating does not include a factor to account for the experience level of either skipper or crew.

Well designed and constructed boats are not expected to be made obsolete by newer designs under PHRF. As faster designs appear, they are handicapped accordingly so that older boats in the fleet can continue to race competitively. Performance handicaps are not static therefore and are adjusted from time to time on the basis of a boat type's performance. The goal is always to provide each well equipped, well sailed boat with an equal opportunity to win.

Base Ratings have been established for over 200 popular production models. All boats of a specific model are given the same Base Rating. That rating assumes the boat has a standard (unmodified) hull, keel, rudder and rig and is equipped to the degree intended by the manufacturer (such as interior joiner work, bunks, galley, etc.). A boat that has altered or removed bulkheads, permanently attached furniture or structural interior components will be considered a Modified Boat.

Minor fairing of the hull/keel/rudder is permitted to correct unfairness in production molds and establish original design profiles. Fairing of the trailing edges of the keel/rudder is not considered a modification, provided any chord of the keel/rudder is not changed by more than two percent from design dimensions. Fairing of through-hull fittings, rudder gudgeons, and propeller struts is allowed.

The boat is also assumed to carry sails of a particular size and have a minimum drag engine/propeller installation. To the extent an individual boat varies from any of these base assumptions, adjustments are applied to the Base Rating to arrive at the specific rating for that boat. Typical adjustments are given in the attached tables.

When a production model is manufactured to the design and specification of a one-design class organization, it qualifies for a One-Design Rating (ODR). These ratings incorporate all adjustments arising from the design of hull and appendages and the use and restrictions of class sail sizes. An ODR is not subject to adjustment provided an engine capable of propelling the hull at hull speed in calm water is carried aboard.

Ratings of custom designed and manufactured boats and modified production boats are generated on an individual basis. Production boats with any modifications to the standard hull, appendages, rig or interior must report such modifications to the Handicap Council.

PHRF ratings are based on the information supplied by the owner on the rating application. Except in very unusual cases, the Handicap Council does not seek independent verification of any data submitted by an owner on a rating application. In signing an application for rating, or for a rating renewal, the owner attests to the completeness and accuracy of the information supplied.

# PHRF REGULATIONS

## PART 1: DEFINITION OF TERMS

### HULL

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LOA	LENGTH OVERALL OF THE HULL
LWL	LOAD WATERLINE LENGTH
BEAM	MAXIMUM WIDTH OF THE YACHT
DISPL	DISPLACEMENT OF THE YACHT IN POUNDS
BALLAST	WEIGHT OF THE KEEL IN POUNDS
INTERNAL BALLAST	WEIGHT OF ANY INTERNAL BALLAST (EXCLUDING WATER, FUEL, ETC.)

### RIG DIMENSIONS

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I	HEIGHT OF THE FORETRIANGLE MEASURED FROM DECK SHEERLINE TO HIGHEST POINT OF JIB ATTACHMENT
ISP	HEIGHT OF SPINNAKER ATTACHMENT MEASURED FROM DECK SHEERLINE
J	PERPENDICULAR DISTANCE FROM THE FORESIDE OF THE MAST TO THE POINT OF INTERCEPTION OF THE FORESTAY AND DECK
JC	J DIMENSION CORRECTED TO ACCOUNT FOR SPRITS OR SPINNAKER POLES EXTENDING BEYOND THE FORWARD LIMIT OF J
JS	FOR PRODUCTION BOATS, STANDARD J DIMENSION TAKEN FROM BASE BOAT RATING LIST. EQUAL TO MEASURED J FOR ONE OF A KIND BOATS.
P	FULLY STRETCHED OR BANDED LUFF LIMIT OF MAINSAIL
E	FULLY STRETCHED OR BANDED FOOT LIMIT OF MAINSAIL
PY	FULLY STRETCHED OR BANDED LUFF LIMIT OF MIZZENSAIL
EY	FULLY STRETCHED OR BANDED FOOT LIMIT OF MIZZENSAIL

### CALCULATED FACTORS

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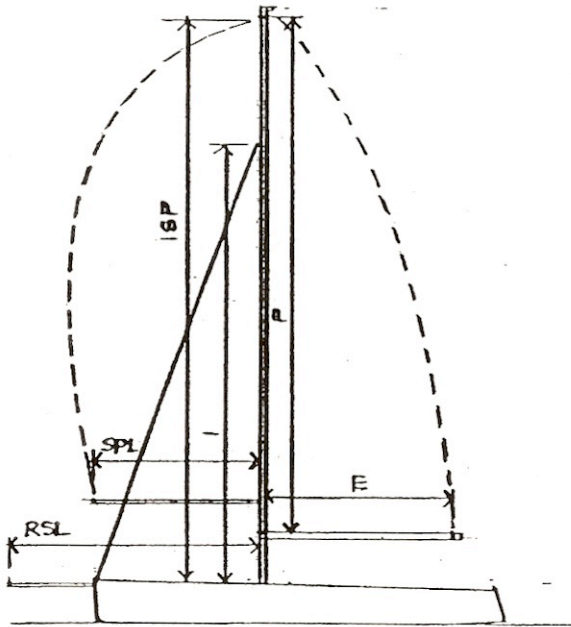
SA	RATED SAIL AREA CALCULATED AS $0.5 * [(I * J) + (P * E)]$
SA/D	SAIL AREA / DISPLACEMENT RATIO CALCULATED AS $SA / (DISPL / 64)^{0.667}$
C	THE ABSOLUTE DIFFERENCE BETWEEN A YACHT'S SA/D AND THE NUMBER 21.0
JAD	THE DIFFERENCE IN AREA BETWEEN A YACHT'S BASE JIB AND ITS RATED (LARGEST) JIB.
D/L	DISPLACEMENT / LENGTH RATIO CALCULATED AS $(DISPL / 2240) / 0.01 * (0.5 * (LOA + LWL))^{0.3}$
B/L	BEAM / LENGTH RATION CALCULATED AS $BEAM / LWL$
JCF	JIB CORRECTION FACTOR CALCULATED AS $0.1 * (JAD / DISPL / 64)^{0.667} * D/L * B/L$



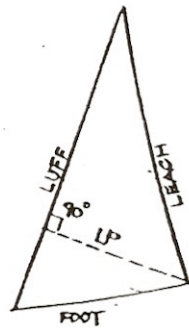
**SAILS**

LP	PERPENDICULAR MEASUREMENT OF THE JIB FROM LUFF TO CLEW.
G	MAXIMUM GIRTH OF SYMMETRICAL SPINNAKERS MEASURED LUFF TO LUFF.
MSL	LENGTH OF SYMMETRICAL SPINNAKER LUFF WHEN MEASURED SAIL IS TO BE STRETCHED FLAT WITH ONLY ENOUGH TENSION TO REMOVE WRINKLES.
SLIM	MAXIMUM SPINNAKER LUFF LIMIT WITHOUT PENALTY, CALCULATED AS 95% OF THEORETICAL FORESTAY LENGTH ( $0.95\sqrt{I^2 + J^2}$ )
ALU	ASYMMETRICAL SPINNAKER LUFF MEASURED FROM HEAD TO TACK
ALE	ASYMMETRICAL SPINNAKER LEACH MEASURED FROM HEAD TO CLEW.
AMG	ASYMMETRICAL SPINNAKER MAXIMUM GIRTH MEASURED FROM MID-POINT OF LUFF TO MID-POINT OF LEACH.
ASF	ASYMMETRICAL SPINNAKER FOOT MEASURED FROM TACK TO CLEW.
SPL	SPINNAKER POLE LENGTH MEASURED FROM CENTERLINE OF MAST TO OUTBOARD END OF POLE WHEN SET IN A HORIZONTAL POSITION ATHWARTSHIP.
RSL	RETRACTABLE SPRIT LENGTH MEASURED FROM SPINNAKER ATTACHMENT POINT ON SPRIT TO FORWARD FACE OF MAST.
WPL	MAXIMUM LENGTH OF WHISKER POLE; MEASURED SIMILARLY TO SPL.

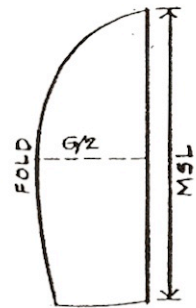
**MEASUREMENT DIAGRAMS**



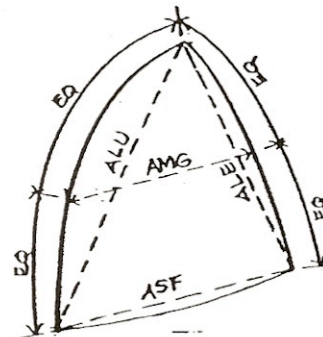
RIG



JIBS



SYM. SPINNAKERS



ASYM. SPINNAKERS

**PHRF REGULATIONS**  
**PART II : HANDICAP ADJUSTMENTS**

**HEADSAILS**

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RATING ADJUSTMENT FOR JIB SIZE IS BASED UPON A YACHT'S JIB ADJUSTMENT FACTOR (JAF) AND TABLE I BELOW. DEPENDING UPON ACTUAL JIB SIZE VERSUS STANDARD JIB SIZE, JAF MAY BE EITHER A POSITIVE OR NEGATIVE NUMBER. IF POSITIVE, ADJUSTMENT IS ADDED TO BASE BOAT RATING. IF NEGATIVE IT IS SUBTRACTED FROM BASE BOAT RATING.

**TABLE 1 JIB ADJUSTMENTS**

JAF	RATING ADJUSTMENT (SECONDS PER MILE)	JAF	RATING ADJUSTMENT (SECONDS PER MILE)
0.0000 - 1.316	0	22.3681 - 25.000	9
1.3161 - 3.947	1	25.0001 - 27.631	10
3.9471 - 6.579	2	27.6311 - 30.263	11
6.5791 - 9.210	3	30.2631 - 32.894	12
9.2101 - 11.842	4	32.8941 - 35.526	13
11.8421 - 14.473	5	35.5261 - 38.157	14
14.4731 - 17.105	6	38.1571 - 40.789	15
17.1051 - 19.737	7	ABOVE 40.8791	16
19.7371 - 22.368	8		

**SPINNKAERS**

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**SYMMETRICAL**

RATING ADJUSTMENT IS BASED UPON THE LARGEST SPINNAKER AS MEASURED BY G/JS AND MSL/SLIM RATIOS. MAXIMUM LUFF LENGTH (SLIM) WITHOUT PENALTY IS EQUAL TO  $0.95 \cdot (J^2 \cdot J^2)^{0.5}$ . EXCESS LUFF LENGTH IS CONVERTED TO ADDITIONAL GIRTH BY MEANS OF THE FOLLOWING FORMULA:  $G/JS \text{ rated} = (G/JS \text{ measured}) \cdot (MSL/SLIM)$ . EXCESS GIRTH IS PENALIZED ACCORDING TO TABLE 2 BELOW.

MAXIMUM SPINNAKER POLE LENGTH (SPL): FOR SPINNAKERS WHERE G DOES NOT EXCEED  $1.8 \cdot JS$ ,  $SPL = JS$ . FOR SPINNAKERS WHERE G EXCEEDS  $1.8 \cdot JS$ ,  $SPL = G / 1.8$ .

**TABLE 2**

G / JS	RATING ADJUSTMENT	G / JS	RATING ADJUSTMENT
<b>UP TO 1.80</b>	<b>0</b>	1.951 - 2.00	-4
1.801 - 1.85	-1	2.001 - 2.05	-5
1.851 - 1.90	-2	2.051 - 2.10	-6
1.901 - 1.95	-3	ABOVE 2.10	ADJUST PROPORTIONATELY

**ASYMMETRICAL**

LIMITING DIMENSIONS WITHOUT PENALTY ARE AS FOLLOWS:  $0.5 (ALU + ALE) \leq SLIM$ ,  $ASF \leq 1.8 JS$ ,  $AMG \leq 1.75 JS$  AND  $AMG \geq 0.75 ASF$ . MEASUREMENTS THAT EXCEED THESE LIMITS WILL BE CONVERTED TO ADDITIONAL GIRTH IN A MANNER SIMILAR TO THAT USED FOR SYMMETRICAL SAILS. EXCESS GIRTH WILL THEN BE PENALIZED ACCORDING TO TABLE 2.

ASYMMETRICAL SAILS THAT ARE FLOWN WITHOUT POLE OR SPRIT BY MEANS OF A TACK PENNANT (LENGTH NOT TO EXCEED TWO FEET) ATTACHED TO THE JIB TACK FITTING QUALIFY FOR A CREDIT OF +9 SEC/MI. A YACHT CARRYING BOTH SYMMETRICAL AND ASYMMETRICAL SPINNAKERS WILL BE RATED ON THE BASIS OF THE LARGEST SPINNAKER CARRIED AND WILL NOT QUALIFY FOR THIS CREDIT.



## NON – SPINNAKER RATING ADJUSTMENTS

RATING ADJUSTMENT IS BASED ON THE RATIO OF A YACHT'S MAINSAIL AREA TO THE AREA OF ITS FORETRIANGLE MODIFIED BY ITS SAIL AREA / DISPLACEMENT RATIO. THIS RATIO IS EXPRESSED BY THE TERM M/G WHICH IS DERIVED FROM THE FORMULA  $M/G = P \times E + (0.6 PY \times EY) / (ISP \times JC) + (SA/D + C - 21) / 45$ . M/G RATING ADJUSTMENTS ARE SHOWN IN TABLE 3.

**TABLE 3**

M/G	RATING ADJ.	M/G	RATING ADJ.	M/G	RATING ADJ.
0.30 – 0.39	+ 26	1.20 – 1.29	+ 17	2.20 – 2.39	+ 8
0.40 – 0.49	+ 25	1.30 – 1.39	+ 16	2.40 – 2.59	+ 7
0.50 – 0.59	+ 24	1.40 – 1.49	+ 15	2.60 – 2.99	+ 6
0.60 – 0.69	+ 23	1.50 – 1.59	+ 14	3.00 – 3.39	+ 5
0.70 – 0.79	+ 22	1.60 – 1.69	+ 13	3.40 – 3.99	+ 4
0.80 – 0.89	+ 21	1.70 – 1.79	+ 12	4.00 – 4.99	+ 3
0.90 – 0.99	+ 20	1.80 – 1.89	+ 11	5.00 – 5.99	+ 2
1.00 – 1.09	+ 19	1.90 – 1.99	+ 10	6.00 – 6.99	+ 1
1.10 – 1.19	+ 18	2.00 – 2.19	+ 9	7.00 and greater	0

MAXIMUM WHISKER POLE LENGTH (WPL) WITHOUT PENALTY: FOR JIBS WHERE  $LP < 1.25 JS$ ,  
 $WPL = JS$ ; FOR JIBS WHERE  $LP \geq 1.25 JS$ ,  $WPL = 0.8 \times LP$

### OVERSIZED MAINSAIL GIRTHS / SQUARE HEADED MAINSAILS

IN THE CASE OF YACHTS NOT BELONGING TO A ONE-DESIGN CLASS OR RACING WITH MAINSAILS DESIGNED FOR THE PRODUCTION RUN, THE FOLLOWING GIRTHS LIMITS ARE ESTABLISHED:

MAINSAIL HEADBOARDS: 6" OR 4% OF E, WHICHEVER IS GREATER, MUW =< 22%E, MTW (3/4 GIRTH)=< 38%E, MHW (1/2 GIRTH) =< 65%E. WHEN THESE LIMITS ARE EXCEEDED, THE OWNER SHALL FURNISH DATA FROM HIS SAILMAKER STATING THE INCREASED AREA ABOVE THE MAXIMUM.

MAINSAILS WITH FULL BATTENS ARE PERMITTED WITHOUT PENALTY SO LONG AS THE ROACH OF THE MAINSAIL HAS NOT BEEN INCREASED ABOVE THESE LIMITS.

## RIG MODIFICATIONS

### ADDITION OF FIXED OR RETRACTABLE SPRIT

AN ASYMMETRICAL SPINNAKER TACKED ON THE CENTERLINE OF A YACHT IS GIVEN A CREDIT OF 9 SEC/MI. TO RECEIVE THIS CREDIT, THE YACHT MUST SAIL WITHOUT A CONVENTIONAL SPINNAKER POLE ABOARD.

IF A YACHT TACKS ITS ASYMMETRICAL SPINNAKER TO A SPRIT OR POLE WHOSE LENGTH EXCEEDS JS, A PENALTY IS INVOKED DEPENDING UPON THE LENGTH OF THE SPRIT/POLE. IF THE SPRIT/POLE IS FIXED AND THE SPINNAKER TACK POINT REMAINS ON THE YACHT CENTERLINE, THE PENALTY IS SUBTRACTED FROM THE 9 SEC/MI CREDIT. IF THE SPRIT/POLE IS NOT FIXED AND ARTICULATES TO ANY DEGREE, THE 9 SEC/MI CREDIT IS NOT APPLIED, ONLY THE PENALTY FOR SPRIT/POLE LENGTH. PENALTIES WILL BE ASSIGNED ACCORDING TO TABLE 4.

**TABLE 4**

SPRIT / POLE LENGTH	PENALTY	SPRIT / POLE LENGTH	PENALTY
Up to 100% OF JS	0	112.1% to 114%	- 7
100.1% to 102%	- 1	114.1% to 116%	- 8
102.1% to 104%	- 2	116.1% to 118%	- 9
104.1% to 106%	- 3	118.1% to 120%	-10
106.1% to 108%	- 4	120.1% to 122%	- 11
108.1% to 110%	- 5	122.1% to 124%	- 12

### INCREASE IN SPINNAKER HOIST (ISP)

IF A YACHT INCREASES ITS SPINNAKER HOIST (ISP) ABOVE ITS STANDARD (BASE BOAT) DIMENSION, A 3 SEC/MI PENALTY WILL BE ASSESSED FOR EACH 8% OF 1 OR FRACTION THEREOF THE HOIST DIMENSION IS INCREASED. THIS PENALTY IS SEPARATE FROM AND INDEPENDENT OF ANY OTHER RATING ADJUSTMENTS DUE TO HULL OR RIG MODIFICATIONS.

### CHANGE IN RIG DIMENSIONS

A CHANGE IN RIG HEIGHT DIMENSIONS (I AND/OR P) FROM THOSE OF THE BASE BOAT ARE MEASURED BY THE RATIO OF THE REVISED SAIL PLATFORM AREA TO THAT OF THE BASE BOAT AS DETERMINED BY  $((I \text{ actual} \times J \text{ actual}) + (P \text{ actual} \times E \text{ actual})) / ((I \text{ std} \times J \text{ std}) + (P \text{ std} \times E \text{ std}))$ .

RATIO	RATING ADJUSTMENT	RATIO	RATING ADJUSTMENT
UP TO 0.91	+15	1.011 - 1.03	- 3
0.911 - 0.93	+12	1.031 - 1.05	- 6
0.931 - 0.95	+ 9	1.051 - 1.07	- 9
0.951 - 0.97	+ 6	1.071 - 1.09	-12
0.971 - 0.99	+ 3	1.091 - 1.11	-15
0.991 - 1.01	+ 0	ABOVE 1.111	ADJ. PROPORTIONALLY

### CARBON RIG ADJUSTMENT

IN CASES WHERE THE BASE BOAT IS EQUIPPED WITH AN ALUMINUM MAST, CHANGING TO A CARBON MAST WILL RESULT IN A PENALTY ADJUSTMENT OF BETWEEN 3 AND 6 SECONDS PER MILE, DEPENDING ON THE RELATIVE SECTION OF THE ALUMINUM MAST. THERE IS USUALLY NO CHARGE FOR CHANGING TO A CARBON BOOM.

### EXOTIC STANDING RIGGING ADJUSTMENT

A BOAT WITH SHROUDS AND/OR HEADSTAY MADE OF SOMETHING OTHER THAN WIRE OR STAINLESS STEEL ROD (SUCH AS PBO) WILL INCUR A HANDICAP ADJUSTMENT UNLESS ALL BOATS OF THAT CLASS HAVE SUCH RIGGING. BACKSTAYS ARE EXCLUDED FROM THIS ADJUSTMENT. THIS WILL BE CONSIDERED ON A CASE BY CASE BASIS.

### ENGINE / PROPELLER ADJUSTMENTS

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INBOARD ENGINE	RATING ADJ.	OUTBOARD ENGINES	RATING ADJ.
NO ENGINE	-12	NO ENGINE	- 6
ENGINE UNDERSIZED	- 6	ENGINE UNDERSIZED	- 3
<b>FOLDING OR FEATHERING PROP</b>	<b>0</b>	<b>PROP RETRACTED WHILE RACING</b>	<b>0</b>
<b>SOLID TWO BLADE IN APERTURE</b>	<b>0</b>	PROP IMMersed, TWO BLADE	+ 6
SOLID TWO BLADE, EXPOSED SHAFT	+ 6	PROP IMMersed, THREE BLADE	+ 12
SOLID THREE BLADE IN APERTURE	+ 6		
SOLID THREE BLADE, EXPOSED SHAFT	+12		



# PHRF OF E.L.I.

THE PERFORMANCE HANDICAP RACING FLEET OF EASTERN LONG ISLAND

## 2013 RATING CERTIFICATE

THIS CERTIFICATE EXPIRES ON APRIL 30, 2014 OR UPON A CHANGE OF OWNERSHIP, WHICHEVER OCCURS FIRST

YACHT NAME	MFG DATE	HULL #	SAIL #
MAKE / MODEL		DESIGNER	
OWNER OR MASTER			
STREET ADDRESS			
CITY	STATE	ZIP	
HOME PHONE	E-MAIL ADDRESS		
<p>I UNDERSTAND THAT IT IS MY RESPONSIBILITY TO NOTIFY THE HANDICAPPER OF CHANGES TO THIS YACHT WHICH WOULD AFFECT MEASUREMENT POINTS, HANDICAP ADJUSTMENTS, OR WOULD ALTER HER FROM A STANDARD BOAT.</p> <p>I CERTIFY THE INFORMATION CONTAINED HEREIN TO BE ACCURURATE</p>			
OWNER SIGNATURE			DATE

FOR HANDICAPPER USE ONLY						
CLASS			RATINGS			
			SPIN		NON SPIN.	
T.C.F.						
OWNER		STND CLASS		BASE		
<input type="checkbox"/> IF O.D.						
SA/D	D/L	B/L	JC	C	M/G	G/JS
ADJUSTMENTS			FACTOR		SEC/MILE	
Base LP						
JAD						
JCF						
SPIN						
NON-SPIN						
ROLLER FURLING						
PROP						
MIN HP						
MISC						
SIGNATURE OF HANDICAPPER						

YACHT MEASUREMENT DATA						<input type="checkbox"/> IF METRIC
LOA	DISPL	I	ISP			
LWL	BALLAST	J				
BEAM	MATERIAL	P	PY			
DRAFT		E	EY			

<b>JIB</b> LARGEST JIB USED % OR LP WPL	<b>SYMMETRIC SPINNAKER</b> G MSL SPL	<b>ASYMMETRIC SPINNAKER</b> BSPL ALU ASF ASYM FLOWN FROM SPRIT OR POLE (Y/N)
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<b>KEEL</b> <input type="checkbox"/> FULL <input type="checkbox"/> FIN <input type="checkbox"/> WING <input type="checkbox"/> CENTERBOARD <input type="checkbox"/> OTHER	<b>RIG TYPE</b> <input type="checkbox"/> MASTHEAD <input type="checkbox"/> FRACTIONAL <input type="checkbox"/> OTHER <input type="checkbox"/> DACRON W/ FURLING JIB	<b>RUDDER</b> <input type="checkbox"/> ATTACHED <input type="checkbox"/> SKEG <input type="checkbox"/> SPADE <input type="checkbox"/> TRANSOM	<b>MODIFICATIONS</b> HAVE HULL, RIG OR APPENDAGES EVER BEEN MODIFIED OR INTERIOR ACCOMODATIONS REMOVED? IF SO PLEASE EXPLAIN: _____ _____ _____
<b>ENGINE</b> <input type="checkbox"/> INBOARD <input type="checkbox"/> OUTBOARD HP <input type="checkbox"/> NONE ABOARD	<b>PROP INSTALL</b> <input type="checkbox"/> APERTURE <input type="checkbox"/> EXPOSED SHAFT <input type="checkbox"/> SAILDRIVE	<b>PROP TYPE</b> <input type="checkbox"/> FOLDI/FEATHER <input type="checkbox"/> SOLID NO. BLADES	

## DIRECTIONS FOR OWNERS

Complete all portions of the reverse side of this Rating Certificate Application, excluding the block reserved for Handicapper use. Please fill in **all** the required information. With more information available, fewer assumptions must be made and your handicap will more accurate and equitable. If you are providing measurements in metric units, please check the appropriate box on the application form. Also please note that the LP of your largest jib may be entered either as a specific dimension or as a percentage of the boat's J dimension. Enter that dimension either way but not both ways.

Measurement terms and procedures are defined on the accompanying sheets. If there is more than one version of your boat, please state which version you own or explain the principal differences between your version and others produced in the same line. Also be sure to list and explain any alterations or modifications from the standard model that have been made to your boat. Should you have questions regarding the required measurements, please contact one of the handicappers listed below.

Mail or deliver your completed application form along with the appropriate fee to one of the handicappers. Please make all checks payable to "ELIYA". You will receive back by mail your completed Rating Certificate showing the current handicap rating for your boat. This completed certificate constitutes your only evidence of a currently valid rating and should be retained for your records. A copy can then be attached to each individual race entry form.

Rating certificates are issued annually and automatically expire on April 30 of the following year, when replaced by a revised certificate, or when the rated yacht changes ownership, whichever event occurs first.

## INDIVIDUAL CERTIFICATE FEES

Initial Application (Boat not previously rated by PHRF/ELI)	\$20.00
Renewal of a PHRF/ELI Certificate	15.00
Revision to a Current Certificate	7.50
Discount for ELIYA members (new and renewal certificates only)	-5.00

## LIST OF HANDICAPPERS

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