Lake Michigan Performance Handicap Racing Fleet Certificates of Handicaps display six different handicaps: HCP, NSHCP and DHCP. Each of these handicaps comes in two “flavors”, TOD (time on distance) and TOT (time on time). The Base Handicap (BHCP) is not shown.

The racing authority chooses which of these will be used for a given race or regatta. The TOD handicap is expressed in seconds per nautical mile and, when multiplied by the distance of the race course, is subtracted from the elapsed time to obtain the corrected time. The TOT value is used within a formula to convert an elapsed time to a corrected time.

The Base Handicap (BHCP) is an estimate of the speed potential of a production or standard sailboat equipped for racing in a wind range of 8-12 knots. The BHCP is determined for a boat in “as-built” or designed configuration. Unless specified otherwise by design, it is assumed that the boat is equipped with a genoa with an overlap (LP) of 155% of J, a symmetrical spinnaker with a maximum width (SMW) equal to 1.8 times the spinnaker pole length (SPL) and a luff length (SL) equal to 0.95 times the square root of the sum of the spinnaker hoist (ISP) squared plus the SPL squared where SPL is equal to J and ISP is equal to I, and either a folding or feathering propeller on an exposed shaft or sail drive strut, a two bladed solid propeller in an aperture, or a lifting outboard motor. The standard boat definition for boats designed with bow sprits or prods is defined by the manufacturer or class rules and may differ from the above.

The Handicap (HCP) is used for scoring a race. It is unique for each boat and reflects modifications made to hull, rig and sail plan. Removing tables, doors, or stoves are considered interior modifications and are subject to adjustments. It is assumed that modifications to a production sailboat are made so that it sails faster through the racecourse. The HCP is therefore adjusted to reflect the increased speed potential of the modified boat when compared to the standard version.

The Non-Spinnaker Handicap (NSHCP) reflects the change in relative speed potential of a boat that races without deploying a spinnaker in comparison to other boats also being handicapped using the NSHCP. The handicap is commonly referred to as the Jib and Main (JAM) handicap. The NSHCP is only used when all racing boats in a class or division are racing without spinnakers.

The Distance Handicap (DHCP) reflects the speed potential of a boat when racing where the courses have relatively less upwind racing and longer legs than in a typical buoy race. DHCP values are equal to or less than HCP.

For boats that differ from the standard or designed specification, the following adjustments to the BHCP generally apply.

**UNDERSIZED SAIL PLAN**
Credit is not given for reduction from designed sail plan.

**ROLLER FURLING HEADSAIL ADJUSTMENT**
Policy: For boat that race only with a roller furled headsail with an above deck furling drum, a +3 sec/nm credit is added to the base handicap. The headsail must remain on the furler except for sail changes.

This adjustment assumes boats race with the maximum sized headsail and carry an inventory of headsails consistent with the boat design and the expected wind conditions. For boats equipped with a roller furling headsail, whether as original or after-market, it is assumed the furling drum will be removed and the upper swivel lowered so that a full hoist headsail can be carried. The only exceptions are for boats where a roller furled headsail is inherent in the basic design or one design classes which require a roller furled headsail be used while racing.

The roller furled headsail adjustment is determined according to the following:

- Assumed for the base boat: +0 sec/nm
- Below deck furling drum: +0 sec/nm
- Above deck furling drum: +3 sec/nm
ROLLER FURLING MAINSAILS
Credit is not awarded to boats that have roller furled mainsails as a standard feature of the production design.

- Luff (In-the-Mast) furled mainsail with no roach or battens +9 sec/nm
- Luff (In-the-Mast) furled mainsail with positive roach or battens +6 sec/nm
- In-the-Boom furled mainsail +3 sec/nm

LP ADJUSTMENT
- 155.0% or less 0 sec/nm
- 155-170% -6 sec/nm
- Over 170% -9 sec/nm

MAINSAIL WIDTHS
Oversized mainsail adjustments are generally -3 per each 6% increment of the rated area over the maximum allowed. However, the adjustments will also depend on the relative size of mainsail compared to the total upwind sail area.

Measured or rated mainsail area shall be calculated using the greater of the actual widths or the following standard widths. Under-sizing one or more girths will not compensate for over sizing of other girths.

- Top or Headboard (HB) 4% of E
- 7/8 Width (MGT) 22% of E
- 3/4 Width (MGU) 38% of E
- 1/2 Width (MGM) 65% of E
- 1/4 Width (MGL) 90% of E

SPINNAKER ADJUSTMENTS
Spinnaker Adjustment shall be the greater of the Spinnaker Rig Adjustment or the Spinnaker Area Adjustment.

For a headsail to be rated as a spinnaker, the mid-girth must not be less than 75% of the foot. Any headsail with a mid-girth less than 75% of the foot shall be handicapped as a Genoa or a Large Roach Headsail.

Boats converting from a pole tacked spinnaker to a centerline tacked asymmetrical spinnaker shall receive the following credits:

- Displacement to length ratio (D/L) less than 90 0 sec/nm
- Displacement to length ration (D/L) at least 90 but less than 150 +3 sec/nm
- Displacement to length ration (D/L) at least 150 but less than 250 +6 sec/nm
- Displacement to length ratio (D/L) at least 250 +9 sec/nm

SPINNAKER RIG ADJUSTMENTS
- Spinnaker hoist (ISP) and/or spinnaker tack point (SPL, JC or TPS)
  - -3 sec/nm for each 12% increment of the product of ISP times TPS (or SPL).
- A centerline tacked asymmetrical spinnaker may be tacked to up to 12 inches forward of J with no penalty provided the area of the spinnaker is no larger than that of the maximum area for which the boat is originally handicapped.

SPINNAKER AREA ADJUSTMENT
- Boats shall be handicapped based on the largest spinnaker carried. If the boat carries a spinnaker pole, it will be assumed that the largest spinnaker is tacked to the pole.
- Spinnaker Area greater than designed standard: -3 sec/nm per each 12% over designed standard
  - Symmetrical Spinnaker Area = 5/6 x SL x SMG.
  - Asymmetrical Spinnakers Area = (ALU+ALE) x (4xAMG+ASF)/12.
  - For boats where the maximum area of the spinnaker is not defined by the manufacturer or class rules, the maximum area allowed without rating adjustment is defined by the formula: Max Area=1.425 x TPS x Square Root of (ISP squared + TPS squared)
LARGE ROACH HEADSAILS (Code 0)
Headsails with an LP greater than 110% and a half width greater than 50% of the foot and less than 75% of the foot are considered Large Roach Headsails (LRH). The adjustment for these sails will be made on a case by case basis. The adjustment will depend on whether the boat is a fractional or masthead rig; and if a fractional rig, whether she carries a other masthead reaching sails.

PROPELLER TYPE ADJUSTMENTS
• Two bladed solid propeller on an exposed shaft +6 sec/nm
• Three or more bladed solid propeller on an exposed shaft +9 sec/nm
• Three or more bladed solid propeller in an aperture +3 sec/nm

CARBON RIG ADJUSTMENT
In cases where the base or standard boat has an aluminum mast, changing to a carbon mast will result in a handicap charge of between -3 and -6 seconds per nautical mile depending on the relative section of the aluminum mast. There is no adjustment for changing to a carbon boom.

EXOTIC STANDING RIGGING ADJUSTMENT
A boat with shrouds and/or head stay made of something other than wire or stainless steel rod, such as PDO, will normally incur a handicap adjustment unless all boats of that class have such exotic rigging by design. Backstays are excluded from this adjustment. The adjustment is considered on a case-by-case basis.

SPORT BOATS
The following four criteria are guidelines to define a sport boat. There can be exceptions, one way or the other, from these criteria. In summary “if it looks like a duck and quacks like a duck, it might be a duck.”
• Displacement-Length Ratio less than 100
• Upwind Sail Area-Displacement Ratio greater than 30
• Downwind Sail Area-Displacement Ratio greater than 75
• A sprit length greater than 35 percent of J

Sport boats do not follow many of the guidelines used to performance handicap boats. Sport boats are handicapped with reference to an “as presented” configuration, whatever it is. This includes mainsail, jib/genoa, and spinnaker dimensions and areas. The base handicap for sport boats references the class spinnaker. If a change is made to the boat’s specifications, it must be reported to the LMPHRF Chief Handicapper and the Chair of the LMPHRF Technical Committee.

INCOMPLETE DATA ADJUSTMENT
In rare and unusual situations, the Lake Michigan Council of Handicappers may authorize issuing a Certificate of Handicap referencing an incomplete application submitted by an owner of a boat not previously handicapped or an owner of a boat submitting an application for a handicap renewal. In such cases, a -15 sec/nm adjustment to the handicap (BHCP) is assessed until missing information is supplied to amend the original application at which time the assessed penalty will be removed and the Certificate of Handicap reissued.