

### The Jouster Winter 2019

#### Windmill Class Association Inc.

Happy New Year, Windmill Sailors! From Flordia to New Hampshire and everywhere in- between, we hope to see you on the water in 2019!



Long live Longtail!



A big Thank you to North Sail's Owner, Brian Malone for helping us store our molds!



Now THAT'S a regatta vehicle!



The Kettle Cup Winners!



Hey Rob Do you think you can hike any harder?



Some Holly, Jolly, Windmillers!



Erie girls RULE!



The Flordia Gang

The Windmill Class is incorporated in the state of Maryland Articles for Tax Exemption, our MD Department ID# D06127773. Our Non-Profit Federal Employer ID number is ID# 47-2704921.



Follow us on Facebook at: Windmill Class Association AND Check us out at: windmillclass.com

### **Great Lakes Championship**



The 2018 Windmill Great Lakes Championship was held on 1-2 September at Erie Yacht Club. Fourteen boats from Maryland, Virginia, New Hampshire and a large home fleet competed for the trophy.

Friday after everyone worked on setting up their boats, we retired to the Erie Yacht Club for dinner and drinks. Lots of questions about tactics and stories with karate sailing hands flying around had us all laughing.

Saturday winds started off at 12 Knots and went light and shifted throughout the day. PRO Bill Lasher and his outstanding race committee crew set up and continuously adjusted the courses. Four races were completed and racing was very tight. That evening the Huntley's hosted everyone at their home for games, conversation, music and a delightful dinner. Thank you Pat and Janet for such a fabulous evening! Sunday due to sever thunderstorms and several water spouts racing was canceled.

Kudos to everyone who sailed, for many of the local Erie fleet it was their first time in a Windmill. Congratulations to Pat and Janet Huntley's who won the Great Lake District Championship! They were followed closely DJ Krahe and junior sailor Anthony Farrah.



First place overall was won by Ralph and Matthew Sponar, second place was Stuart Proctor and Christine Maloney and third place Larry Christian and Allie Sponar. After Mike Koehler and Heather Hertel's introduction to Windmill Racing they purchased #5416 Harbinger. We look forward to seeing everyone again on the racing circuit.

> Until then Safe Journeys, Sandy Sponar

Pos	Boat	Name	Total	Race 1	Race 2	Race 3	Race 4
1	5060	Ralph & Matt Sponar	6	1 <sub>(1)</sub>	1 <sub>(2)</sub>	1 <sub>(3)</sub>	3 <sub>(6)</sub>
2	5404	Stuart Proctor/Christine Maloney	10	3 <sub>(3)</sub>	2 <sub>(5)</sub>	4(9)	1 (10)
3	5319	Larry Christian/Allie Sponar	15	4(4)	4(8)	5 <sub>(13)</sub>	2 <sub>(15)</sub>
4	5707	Pat & Janet Huntley	16	5 <sub>(5)</sub>	5 <sub>(10)</sub>	2 <sub>(12)</sub>	4 (16)
5	3524	Anthony Farrar/DJ Krahe	17	2 <sub>(2)</sub>	3 <sub>(5)</sub>	7 <sub>(12)</sub>	5 <sub>(17)</sub>
6	5586	Allen Chauvenet/Sarah Steward	28	7 <sub>(7)</sub>	7 <sub>(14)</sub>	8 <sub>(22)</sub>	6 <sub>(28)</sub>
7	5703	Tim & Joe Weibel	30	8 <sub>(8)</sub>	6 <sub>(14)</sub>	6 <sub>(20)</sub>	10 <sub>(30)</sub>
8	5303	David & Will McBrier	37	11 <sub>(11)</sub>	8 <sub>(19)</sub>	9 <sub>(28)</sub>	9 <sub>(37)</sub>
9	5187	Tim Polaski/Gary Kuhn	37	10 <sub>(10)</sub>	9 <sub>(19)</sub>	10 <sub>(29)</sub>	8 <sub>(37)</sub>
10	5707C	Dan Claxton & Dan Litten	40	9 <sub>(9)</sub>	11 <sub>(20)</sub>	13 <sub>(33)</sub>	7 <sub>(40)</sub>
11	4955	John & Erica Diemel	43	DNC <sub>(15)</sub>	10 <sub>(25)</sub>	3 <sub>(28)</sub>	DNF (43)
12	4499	John & Andrew Vallee	45	6 <sub>(6)</sub>	13 <sub>(19)</sub>	11 <sub>(30)</sub>	DNC (45)
13	3420	Caroline Mashyna & Karen Weibel	48	12 <sub>(12)</sub>	12 <sub>(24)</sub>	12 <sub>(36)</sub>	12 <sub>(48)</sub>
14	5416	Mike Kohler & Heather Hertel	52	13 <sub>(13)</sub>	14(27)	14(41)	11 <sub>(52)</sub>

### Southerns



1st - Ethan & Trudy Bixby 2nd - Nathaniel & Shiela Plant 3rd - Mike Crotty & Rob Woithe



# Northern Championship

WINDMILL NORTHERN REGATTA

MASSABESIC LAKE

**BY ANABELLE WATT** 



It all started when my Dad signed us up for the Windmill Nationals in Maryland. Followed by the Northern's at our home lake, Massabesic. I was very excited because I would get to see the friends I had made from the windmill regatta that summer.

I was new to the sport and had only just started learning to sail in the spring. I control the jib and whisker pole, whilst my Dad controls the boom, mainsheet, tiller, centerboard, cunningham, and many more.



Our boat's name is "Inspiration" and is in the Windmill fleet 66. Any way back to the regatta;

As soon as I wake up every morning for sailing my Dad struggles getting me out of bed resulting in him having to give me juice, so I can get up. I'm not a morning person! My Dad Ed Watt, always checks the weather before we sail, so he knows how to rig the boat properly. I remember him looking at me and saying, "todays going to be fun" with smile. The wind levels were gusting up to 33 knots, which I wasn't aware of until we got to the lake.

Allie, a windmill racer and Larry's crew, always loves to lend me her clothes on cold, windy days. Which I am very thankful for as I'm always unprepared. My Dad and I like to call her Auntie Allie because she is always giving us things. Thankfully that day she lent me something warm to wear.

I was a little nervous prior to sailing as I heard the beating of the wind scrapping at my ears. Once my Dad and I took off we immediately were hit by a giant surge of wind, pulling the boat onwards.



My heart was racing, and my adrenaline was kicking in.

On our way to Deer neck channel, where the race would be held, we capsized for the first time. As the boat started to tip, I fell off the back of the boat like a scuba diver embarking on an underwater journey. This was the first time we had ever capsized. I was quite scared at first but remembered what my Dad told me on what to do if we capsized. I climbed in the inside of the boat and sat inside vertically, whilst my Dad pulled the center board as hard as he could, which eventually upturned the boat. This capsize was one of many.

As we traveled on, the wind got fiercer and scratched the lake like nails on a chalk board. If I'm being completely honest, I was quite terrified!

# Northern Championship

As we were pulling into Deer neck channel we capsized again. This time turtling the boat, but we soon brought it back up. The boat was full of water, reminding me of the Titanic. I didn't want to sink, so I bailed as fast as I could as we went down wind with the drains opened. My adrenaline was so high, I cut my knee against the sand paper at the bottom of the boat which I didn't feel. It now has left a permanent scar, a reminder of the event that I will always keep with me.

During the first race we planed the boat, which was exhilarating!

By now my clothes where plastered to my skin and my hair was soaked. Luckily the race committee called everyone to go in. The wind had become stronger and there were several capsized boats.

I was so thankful to be back on land and dry again. Later that day when the wind calmed down, we raced again.

Day 2 brought with it a break in the weather, there was very little wind and we were lucky to get in one race.

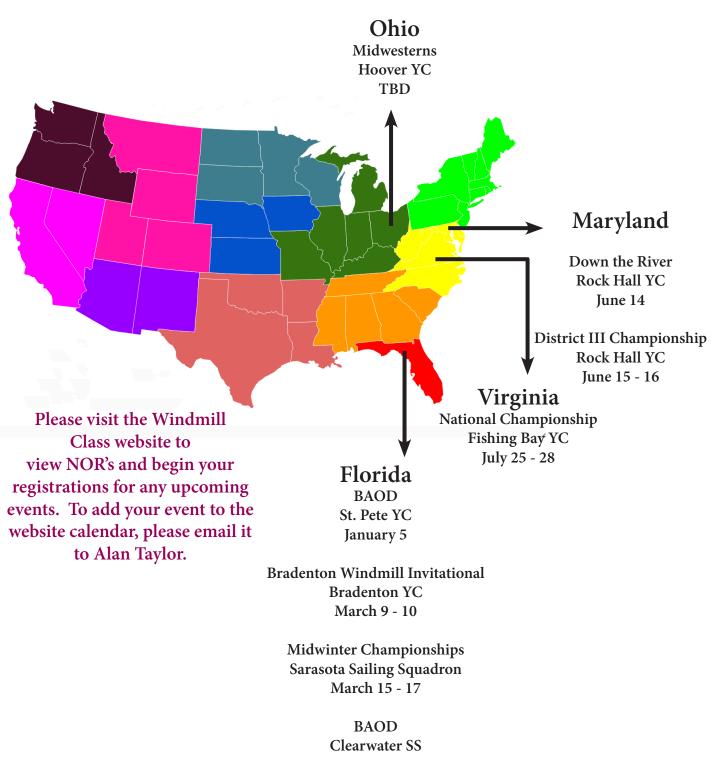
In conclusion, I learned a lot from that eventful day, be brave, be quick, and sail safely in heavy wind.

#### Congratulations to Ethan & Trudy Bixby for their first place win.



Position	Boat	Name	Total	Race 1	Race 2	Race 3	Race 4
1	5700	Ethan & Trudy Bixby	4	1	1	1	1
2	5060	Ralph & Matt Sponar	9	2	3	2	2
3	5319	Larry Christian & Allie Sponar	14	3	2	3	6
4	2117	Jack Cartland & Johanna Bradford	19	4	5	6	4
5	5001	Geoff Ling & Ben Ling/Luca Sona	19	6	4	4	5
6	3653	Steve Allen & Michelle Harris	26	5	8	5	8
7	5426	Ed & Anabelle Watt	29	7	7	8	7
8	5102	Glenn & Joan McKibben	33	DNC	6	7	9
9	5586	Allen Chauvenet & Jess Steward	36	DNC	DNC	DNC	3
10	5707	Pat & Janet Huntley	44	DNC	DNC	DNC	DNC

### **Upcoming Events...**



May 4 -5

## For the Good of the Class...



THE BOOM STOPS HERE

Ralph Sponar III WCA President

Good Day Fellow Windmillers,

I'm happy to report the Nationals at Rock Hall was a great success! Our Board of Directors is still in place for another year and working hard to support you with updates to the By-Laws. We had a successful raffle prize drawing and the Class Hull and North Sails Jib was won by Frank Murphy. A special Thank you to Sue Caswell who implemented a shore or sailing safety check-in board. It was critical on Saturday to keep track of everyone because of the weather and fog. Another Thank you to Marcy Sherman who designed and handmade the beautiful pottery trophy bowls. Of course the biggest Thank you, goes to Sandy who endlessly works throughout the year for our class. She has many helpers and we are grateful for the help that make our Nationals go so smooth.

We had great participation with 10+ boats in each of the 14 different regattas this year. We welcomed new Windmillers and it was great to see boats back on the race course that had been stored away in garages for many years. At the Erie Great Lakes Championship Regatta there were 5 new to Windmill skippers and families who raced and 8 families who came to their first Nationals Event this year.

Sandy and I are looking forward to another great season in 2019! If you get a chance jump onto www.Windmillclass.com look under the event tab, and start signing up for regattas! The 2019 tab is active and you can already sign up and start to make plans. Call or email us if you're interested in volunteering to help us make your next Windmill year a success.

The class contracted Johannsen Boat Works to build another Windmill Hull #5711. It has been purchased by John Coleman. Mark Johannsen Boat Works building is being torn down in Jan 2019. He will no longer be building Windmills, but Mark is trying to find a new building. The logistics of moving class mold-assets are in progress and new builder research is also under review. We will keep you updated with any new information.

Mark Johannsen Boat Works has built:

- 5711 John Coleman (Pennsylvania)
- 5710 John/Ann Danneberger (Maryland)
- 5709 Sandy Sponar she named it Miss Behavin' (Maryland)
- 5708 Frank Murphy he named it "Golden Ticket" (Virginia)
- 5707 Pat and Janet Huntley "Graffiti" (Pennsylvania)
- 5706 Lin Robson "Sojourner" (Florida)
- 5705 Chris and Nancy Demler "Speed Bump" (Ohio)
- 5704 John Deimel (Pennsylvania)
- 5703 Tim Weibel "Scorpion" (Pennsylvania)
- 5702 Ralph Sponar "Hummingbird" (Maryland)
- 5701 St. Petersburg Yacht Club (Florida)
- 5700 Ethan and Trudy Bixby "Silly Wabbit" (Florida)



Until next time Sail fast my friends! Ralph Sponar, President

### For the Good of the Class...

#### WCA ANNUAL MEETING

JULY 20, 2018

The annual meeting took place at the Rock Hall YC and was called to order by President Ralph Sponar at approximately 7:30PM on July 20th. Minutes of the 2017 meeting were published in the Jouster so it was voted to dispense with reading of the minutes.

Ralph noted that this nationals meeting saw every active Windmill fleet represented: Newly rechartered Fleet #2 (Bradenton, FL), Fleet 16 (Kansas City), rechartered Fleet 59 (Fishing Bay YC, VA) Fleet 60 (Hoover SC, OH), Fleet 66 (Massabesic YC, NH), Fleet 82 (Rock Hall YC, MD) and Fleet 83 (Erie YC, PA). The number of individual entries in the Nationals represented only the 2nd time in this century that >30 boats entered.

Officer Reports were given by all of the Nationals Officers in person.

1st VP Roy Sherman (Rules Committee Chair) reported that there were 2 changes to the bylaws up for a vote (as proposed at the last meeting and published in the Jouster). One allows the use of a "GNAV" or

upside-down vang (not explicitly prohibited by prior bylaws but proposed to make it clear it is legal since a small change in the forward part of the foot of the mainsail is required). The second allows (does not require) the use of a full-length batten as the upper batten in the mainsail. It was discussed and recognized that the Rules Committee and Chief Measurer will have to add an additional girth measurement at that point to prevent any sail maker from adding extra area to the roach of the sail. This will be put out as a ruling with defined measurements in the near future. Ballots on these issues had been mailed or given to Roy Sherman who reviewed them; Allen Chauvenet confirmed that all votes were cast by eligible voters and Lance Williams counted them. Both measures passed easily.

2nd VP Alan Taylor (Technology) reported on the website which is operating well. He stressed the need for people to send in regatta announcements, results and use the website to sell or buy boats, look for rules and rigging advice and to send any questions or queries to him. Email addresses for all National Officers are available by clicking on their names on the home page.

Chief Measurer: Larry Christian reported that each year there were fewer issues with foils, sails, and other measurement questions. When minor deviations (offering no increased speed) have been found, Larry has indicated what needed to be changed and was delighted to report that in follow up years these changes had in fact been made. This year the position of the stop for the DB was measured (44" + depth of aft end of trunk is the maximum) and several boards were unknowingly out of compliance. Larry marked all board with any issues so they can be easily fixed to come within class rules.

Secretary: Allen Chauvenet reported that total membership had almost reached that of 2017 and with some upcoming regattas the current 98 should increase to the 2017 number of 102 before the end of September. An increasing number of members are (thank you!) sending in renewal dues without a reminder. Allen is working well with Lance Williams (see below) in recording the memberships (anyone can check their status by using the "Dues" tab from the class website home page) and getting checks deposited in a timely fashion such that Lance is able to track the deposits and thus keep our financial books in order. Allen also answers inquiries re plans as well as questions from people who have a newly-acquired boat.

Treasurer: Lance Williams reported on the financial status of the class. Fortunately we are on a sound footing, have seen a few more new boats built and are keeping up with US Sailing membership, insurance and investments (new hull owned by class). Lance handed out a detailed statement to those in attendance and it is available to any member who requests it from Lance.

Class Hero: Sandy Sponar was recognized for all the work she does in this unofficial position. While the list is long, the greatest is her work in organizing the Nationals every year—working out contracts with the host clubs, finding a PRO (and with the host club all of

# For the Good of the Class...

the support boats and people) obtaining gifts and support from multiple sailing sources so that all entrants leave with some wonderful sailing items. Many people contribute to the Nationals but Sandy is the glue that holds everything together. She was given a very well deserved round of applause!

After some general discussion re class promotion, it was moved, seconded and approved that the meeting be adjourned.

A drawing for all of the wonderful gifts took place immediately after the meeting. Frank Murphy of Fleet 52 had won the jib donated by North Sails at a drawing at the pre-regatta dinner at Waterman's Crab House the prior evening while everyone else walked away with delightful gifts.

It should be added that at the trophy presentation on Sunday, Frank Murphy also won the raffle for the new Johansen hull (5708)!!

Respectfully submitted to the membership by: Allen Chauvenet WCA Secretary.

We need YOUR help!

Want to keep the Jouster running? We need everyone's help with regatta write ups! Without content, we have nothing to publish. Please send your articles to: windmill.class.sailing@gmail.com

New year, send your DUES!

Please make sure you are up to date with your dues payments to Allen Chauvenet. Help keep our class running! The 2019 Windmill Nationals will be held at Fishing Bay Yacht Club in Deltaville, VA on July 25 -28



Please take a minute and sign up on the Windmill Class website for your Nationals. As of January 1, 2019, there are 10 boats signed up. Help make this the best Nationals yet!

The yacht club is on Stove Point and has water frontage on both Fishing Bay and Jackson Creek. Fishing Bay is a well-protected bay on the Piankatank River.

> → Measurements will take place on Thursday July 25. Please plan accordingly

→ Racing will begin Friday July 26 and will conclude on Sunday the 28th.

→ Dinner/ Annual meeting will be held on Friday the 26th.



Please visit the Fishing Bay Yacht Club website to learn more about local accomodations

https://www.fbyc.net/visitor/accommodations/

### For the Good of the Class... New Members!

Maggie Arnesen, David Burrell, Kai Dolan, Christina Chauvenet

Dave Ellis--honorary member--purchased Windmill 3603 from Chuck Noon.

Jake Fath (2049) & Manatee River Pram Fleet (3886) as new active memberships (both FL).

Frank Patch (NC) 2890 new associate member (hope-fully to become part of Fleet 59 at FBYC).

New Plan Package: Patrick Mills (5625)--has nothing to do with other Patrick Mills from the past...purchased to get plans so he can build an illegal (oversized) boat! (FL)

#### ERIE

Anthony Farrar (listed as 3523 because he joined as active member to skipper at Erie)

Daniel (DJ) Krahe--owns 3524 and joined (renewed) as active member at Erie regatta (actually crewed for Farrar)

Dan Claxton (4450), John Vallee (4599), David Mc-Brier (4955), Michael Kohler (5416) and Tim Polaski (5187)--either Claxton or Vallee actually lives in Canada

#### **OHIO FLEET 60**

Doug & Allie Boyer (listed 4099 joined to sail Lisa Hayes' 5275 in Nationals)

Nate Ireland (listed as 4200--sailed Craig Tovell's boat at Hoover--changed Craig to 5043 which is McLaughin he is restoring)

Dave Stetson (3251)--really owns the boat & raced it at Hoover!



Mike Kohler and his new Windmill, #5416



John & Anne's new ride, #5710



John with his hull, #5711

# **Approved 2018 By-Law Changes**

### 4. SAILS – Updated October 2018

X.4.A. Rules pertaining to the use of sails while racing is given under Racing Rules (Art. XV).

X.4.B. Sails may be of woven Dacron type materials (X.2.G defines Dacron).

X.4.C. The official class insignia as it appears on the plans (14.25" inches in diameter) shall appear on both sides of the mainsail. Insignia should be back-to-back and located just above the top batten pocket, in the center of the sail.

X.4.D. The registration number issued by the WCA shall appear on both sides of the mainsail, using the guidelines in the Racing Rules of Sailing, Appendix G1.2 and G1.3. This prescribes numbers that are minimally 300mm (11.81" inches) high and minimally 60mm (2.36" inches) between characters and from the edge of the sail.

X.4.E. Letters to designate the nation under which the boat is registered may be worn.

#### X.4.F. (deleted)

X.4.G. After measuring, stamping and certification of each suit of sails, the owner is obligated to inform his fleet measurer or Chief Measurer of any changes or alterations which would materially affect the dimensions and specifications of his sails.

X.4.H. Sails are subject to re-measurement and to cancellation or approval at any time.

X.4.I. All owners and sail makers are hereby put on notice that any attempt to circumvent or take unfair advantage of the simple restrictions outlined herein shall leave them open to disqualification of any such sails. This provision is solely for the protection of the WCA and it shall be exercised stringently.

X.4.J. Spinnakers are not permitted.

X.4.K. Adjustment of the clew outhaul, tack downhaul and Cunningham of the mainsail is permitted at any time provided the maximum length of the luff (16' 0") and foot (9' 5") are not exceeded. Adjustment of the halyards is permitted at any time. All other means of artificially changing the shape or length of the foot, leech or luff of either the jib or mainsail while racing is prohibited.

X.4.L. No extra battens or other means of artificially stiffening the leech or roach of either sail shall be used. X.4.M. The use of transparent windows of reasonable size, in the main and/or jib is permissible. Based on today's practices, a reasonable size for sail windows is something less than 4' square feet.

X.4.M.1. The mainsail shall be equipped with head, tack and clew grommets. The distance from the center of the grommets to the edge of the sail cloth, not including the bolt rope, shall not exceed one inch. In the case of the head grommet the fore and aft location is not controlled.

#### X.4.N. Mainsail-Updated October 2018

Definitions and measurement techniques per ERS20172020 are used on the mainsail. (Or latest version of the World Sailing Equipment Rules of Sailing).

X.4.N.1. There are four measurements to be made on each mainsail. They are: a. Top Width measurement of the width of the sail at the head. b. Measurement of the length of the leech c. Measurements of the girth taken at the mid-girth. d. Measurements of the girth taken at the 3/4 height girth.

X.4.N.2 The maximum Top Width is 7" inches, from the Head Point to the Aft Head Point. The headboard must fit within this head width.

X.4.N.3. The maximum leech length is 17' 10.5" inches, measured from the Luff Head Point to the Clew Point. These are the apexes of the corners, including bolt ropes. See diagrams. This dimension is to be taken with the battens in their respective pockets.

## **Approved 2018 By-Law Changes**

X.4.N.4. The maximum mid-girth shall not exceed 71.5" inches and the maximum 3/4 girth shall not exceed 43" inches. These girths are measured as a radius from the leech point to the closest point on the luff. The leech Mid-girth point is found by folding the head down to the clew and aligning the apexes of each corner, including bolt rope and clew slugs. Hold securely and tension the sail to the mid-point and mark with an indelible marker. The center of the batten pocket must be within 1" inch of that point. Unfold the sail and then fold the head apex down to the center leech point tension and mark the 3/4 girth point. The center of the top batten pocket must be within 1" inch of that point. The center leech point tension and mark the 3/4 girth point. The center of the top batten pocket must be within 1" inch of this mark. Measure each girth to the closest point on the luff, including the boltrope.

X.4.N.5. The luff of the mainsail shall under no circumstances be stretched beyond 16' feet while racing. The 16' foot dimension is the distance between the center of the grommet in the head of the sail and the center of the grommet in the tack of the sail. So that this distance will be maintained for all to see, permanent bands 1" inch wide in a contrasting color shall be placed around the mast. The centerlines of the bands shall be located as follows:

X.4.N.5.a. 46-1/2" inches maximum up from the theoretical top of keel, the centerline of the prime reference band is placed. Six inches below this, the centerline of a second band may be placed.

X.4.N.5.b. Sixteen feet (16'- 0") maximum above the centerline of the prime reference band the centerline of the upper prime reference band is placed. Six inches below this band, the centerline of a fourth band may be placed. The secondary set of bands six inches lower than the prime bands is optional. The center of the grommet in the tack of the sail will be adjacent to or above the band which is located 16' feet below that band which is adjacent to or immediately above the center of the grommet in the head of the sail. This implies that the center of the grommet in the tack of the grommet in the tack of the sail will not be positioned below the prime reference band unless the center of the grommet in the head of the sail is lowered a full 6" inches to the secondary band, at which time the tack of the sail may be lowered

to the lowest secondary band.

X.4.N.6. The foot of the mainsail shall not be stretched beyond 9'- 5" inches. To permit checking, a permanent band one inch wide shall be placed around the boom in a contrasting color with the centerline of the band being 9'- 5" from the aft face of the luff groove or sail track with the boom perpendicular to the mast. The centerline of the grommet in the clew of the mainsail shall not be set aft of the centerline of the boom reference band.

X.4.N.7. The forward 26" inches of the foot rope may be loose-footed to allow the use of a GNAV. The use of sleeve around the GNAV is prohibited.

X.4.N.8. The mainsail tack must be positioned as close as possible to the mast and boom so that each boltrope continues in a nearly straight line as it leaves the sail slot. Only one mainsail tack grommet is allowed.

X.4.N.9. Battens for the mainsail shall be three in number and have the following maximum lengths. These battens are intended to approximately divide the leech into equal parts and are also controlled in X.4.N.4. Upper - 18" inches The top batten can also be full length provided that the leech position is within 1" of the 3/4 girth point location and the inside of the stitching on the bottom side of the batten pocket at the luff must be less than 50" inches from the top of the head board. Middle - 27" inches Bottom - 24" inches Maximum width of battens shall be 1- 1/2" inches.

X.4.N.10. If a Cunningham cringle is installed in the mainsail, it shall be no more than 10" inches from the center of the tack grommet and no more than 3" inches from the luff of the mainsail. It may be no more than 1" inch in diameter. In lieu of a grommet the Cunningham device's point of attachment may be sewn directly to the sail. The bolt rope may be removed from the luff of the mainsail between the Cunningham and tack grommets.

# **Approved 2018 By-Law Changes**

Mainsail	Minimum	Maximum	Width Max	Tolerance
				+/-
Top Width		7" inches		
Leech Length		17' 10.5"		
Mid Girth		71.5" inches		
¾ Girth		43" inches		
Luff		16' feet center of		
		head and center of		
		tack grommet		
Foot center of tack		9' 5" inches		
and clew gromets				
Loose Foot		Forward 26" inches		
Cunningham Hole		10" inches		
Windmill Insignia		14.25" inches		
Sail Numbers		12" inches		
Top Batten	18"	Or Full	1.5" inches	
	inches			
Middle Batten		27" inches	1.5" inches	
Bottom Batten		24" inches	1.5" inches	