

## September Newsletter

John Bertelsen [REDACTED]

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A little different newsletter this month. A report on Light House Night for certain, but I will suspend the update on the builds by Kevin Waldo and Jeff McCabe until next month so that I can present two very interesting articles written by our members. Sunday boating on the center pond has been very popular as there has been great weather on weekends. Here is Larry and Joyce Wheeler with one of their daughters enjoying their first visit to the pond:



### Light House Night

It had to be done. We had to do something to celebrate the club and to try to put some normality into boating this year. We gratefully received permission to hold Light House Night (#2 technically), which would have been conducted as part of the Fall into the Arts Festival that was canceled with so many other events this year. Social distancing and no advertising of the event were the only caveats. You can see the Minions were fully on board with masking up:



Initially scheduled for Saturday we postponed until Sunday to get slightly better weather, and wow did we ever get a nice day. There was great participation from the club with 17 to 20 boats on the water, and we had a nice, manageable crowd to watch too.







Those pictures were taken by John Bishop and show the beginnings of the evening as we were approaching dusk. There were several boats that were making notable appearances: Above Gary Tschautscher is helping me get Bill Uhl's Swedish Ferry set up (I added lights inside and out and it got some favorable comments from spectators), the Gravy Boat was finally complete with casks of rum and lighted lanterns hanging from the boom, Ken Goewey brought a stunning completed Al Bickford transport, Jeff McCabe brought a water worthy Stubby Tug needing only finishing touches in the appearance, and other first timers got into the spirit of the event with first time lighting up their boats.

Stubby:



Bickford/Goewey Transport:



Gravy:



After dark:





That is Jim McKie's ODOM in the center very nicely lit up, Mike and Jeanette Ross's Brooklyn lower left, Bill Uhl's Ferry just left of the ODOM farther out in the pond, and just right of the ODOM is the original Light House. It was just an outstanding day and evening and everyone had a great, great time! There is so much more to experience and learn about the boats that have been on the pond this year. I can't wait until we can get together again and start sharing our boats at a meeting. We have a lot of boats to catch up on!

### New to RC Sailboat Experience

If you are into RC sailboats chances are you remember vividly learning to sail. I usually tell people that you can learn to sail the boat in 20-30 minutes, that is you can learn the radio, controls and basically how to make the boat go. Then you spend the rest of your life learning to be a good sailor. Last month we were introduced to Dorothy Zimmermann who at 92 years decided it was time to extend the experience she has had with her Northern Lights Sailing Club and sailing full sized boats herself into the experience of RC sailing. She wrote a very nice article for the Northern Lights newsletter that she was willing to share with the EMYC:

*Ahoy from the Ancient Mariner - about to get back on the water before summer ends.*



*Now, I did say water - I did not say Lake. I've downsized from my old O'Day 17' Daysailor (from a few years back) to a new DragonForce65 RC sailboat. Hey, I'm excited! It gets me out of the house and onto the water - well, ok, a pond! But if you're going to compare size, think of my O'Day on Lake Superior or maybe Lake Minnetonka; thus, my new (albeit smaller) RC will give me the same challenges that I*

*had all those years. Hopefully, I won't get stuck in the weeds and need to walk in the water - did that a few times with the O'Day!*

*The DragonForce 65 is currently the best-selling RC yacht in the World. Yup, that's what mine is. Let's have a few more stats about it - the sleek lines and competition-developed sails make the DF65 one of the best competitive racing yachts in her size, even at 10 times the price. Racing is all about the skipper; these boats have the design to be a winner. Mine is a V6, 2.4 GHz for those of you who are more technical.*

*I first have to get my thumbs nimble as that's how I control the 'sheets' for the sails and the rudder. The 'tiller' is on a toggle operated by my right thumb. It toggles horizontally. When I jibe or come about, my left thumb has to function vertically! Put yourself into this picture: "GG" (my boat's name for Great Grandmother) is in the middle of the Pond at Centennial Lakes or any other body of water with other boats around it. GG is sailing along on a starboard tack, with sails nicely filled, when along comes a wind shift - like it does on Lake Pepin. OMGosh - there's a boat ahead of me, a couple little speed boats coming up behind me - panic - which thumb do I use?? I begin to use both thumbs going the same direction. Oops - no, GG - I call out - the other way! I look at my thumbs and begin toggling one up, then down. Ok, that took care of the sails, but I need to figure out the other thumb. Dang - which did I just use to get the sails corrected . . . well, you can see, this is going to take a while.*

*But hey, I'm out of the house - I'm at a 'lake' - I have a sailboat - it's sailing. I can (in time!) get it to go where I'm controlling it to go. I can relax - and did I say breathe? Hopefully, handling my O'Day (the sheets, tiller, and sails) will all come back and I'll be racing again. Woohoo!*

*Who said 2020 will keep me home??*

*Watch on our new Facebook NLSC page - events are posted there. I'll be posting RC events until the snow flies, and hopefully, you will come over to Centennial Lakes and join me, along with other NLSC members and friends. I might even let you try your hand - or I should say 'thumbs' - with my GG. She's a great old girl!*

*Woohoo -the Energizer Bunny is up and running again!*

*I'd like to mention that I've met some of the nicest, and most helpful members of the Edina Model Yacht Club. The Commodore, John Bertelsen, and other members have given their time and help endlessly to me and the others with me - and I've joined their Club as a way to say Thank you. They are also a very good resource if any of you are interested in RC models, whether a complete boat, one to build yourself, or redesign. It doesn't have to be a sailboat - but hey, we're sailors!*

*Fair Winds*



Dorothy told me after one of her learning times on the pond she was just emotionally wrung out. Remember that? Give Dorothy (and that is Jackie above left from the Northern Lights with her SeaWind) a lot of credit for taking on RC sailing!

### Paddle Wheelers

Back in the July Newsletter there was an article by Vernon Bollesen regarding his smaller paddle wheeler and the difficulty he was having trying to get the boat to run correctly. That article triggered the following thoughts from Captain David Robb:

*I saw the notes about the problems with the Paddle Boat in your newsletter. What I see in the small picture is too many radians for paddles, paddles that are not adequately water vented and that appear to dig too deeply into the water that compromises the shove that is needed. If this boat were built to full size, it would have the same driving characteristics as the model. These problems are not unique. The 105 foot Minneapolis Queen that I drive at Bohemian Flats was screwed up because the designers did not have a fundamental grasp of the problem. On her, the bottom was built barge style - totally flat for her length with a burbling transom like a motor boat. What it needed was a bottom that gradually rose from amidships to meet the waterline at the stern so that undisturbed water met the paddles flat. We had to remove the underwater paddles and weld the wheel still. What a shame.*

*Back in my early days of boat design (70's), I worked on a full size double decked 72 foot paddle boat design for the Mississippi at Dubuque, Iowa. My job was to engineer the paddle and deck railings that had a lot of filigree on her. This was before the days of computer design when we did most everything in ink but I digress.*

*The picture of the boat in your newsletter was too small to get a good look but before one chucks the whole project and builds another, let's reconsider the problem. First, it is not rocket science. Most boats can be designed with the minimum of a 4th grade math education.*

*In analyzing a paddle wheel performance, you have to think about a paddle and a canoe paddle is familiar to most. If you were designing your own, what would it look like?*

*First is to determine how long the paddle blade will be. The deeper it dips, the more water it pushes which is good but is harder to paddle. You have to visualize pressing the water down with the paddle in front, stroking with a grunt and then lifting the water up at the back of the stroke. Remember, you want to push or pull water, not*



*lift it up or press it down. That gets you nowhere. Remember, in hydrostatics, if you're not pushing or pulling, you are dragging. Lifting and pressing heavy water is a waste of energy and saps your strength. The wrong size paddle will not get you very far and you will be exhausted long before you get there.*

*It is the same on a paddle wheel. Regardless of the diameter, the paddle should only be immersed far enough to pull and push the water and no more. If it is immersed only a few inches too far, it seriously affects performance as you can imagine. Of course, there are many dissertations on engineering a paddle dating back to the 1800s that reproduce a jungle of mathematical calculations but for us real people who just want to design a boat, I always opt for the simpler graphic calculation. In other words, draw the ring of the paddle to scale. Lay in a nice flat water line and radii representing the spokes of the wheel - usually an even number for ease of division. The bigger the boat, the bigger the ring and the more radians you will require. It is easy to spot the 5 o'clock and 7 o'clock positions where the paddles intersect the water and depart. This needs to be fine tuned and common sense will be your guide. Too few paddles will reduce your power. Too many, and you will be pushing aerated water when you want solid water. You can see this on paddle boats today that create a lot of splashing that is often carried up the back of the wheel. That is the same as turbulence on an airplane wing. Usually 3 or 4 paddles in the water at that point is sufficient. Now that the paddle is attacking and retreating the water efficiently, we need to determine the board length of the paddles. Always make the length of your paddles as close to the full width of the boat as possible. The limiting factors here are the engineering requirements for mounting and driving the paddle.*

*Next, determine the width of the paddle boards. Here, you have to look at your drawing from the side again and realize that the wider you make them, the more shove you get but it is compromised by our old nemesis, lift and press. Sketch the widest paddle you can without causing a huge splash. If it is a problem, you can build two boards one above the other on each radian and leave a reasonable amount of space between them for water to drain but not lose a lot of shove. (Usually about 6" on a full size boat.) The water that escapes between the paddles is minimal and is called Slip. It occurs naturally in all propellers, too.*

*I have not provided any hard and fast formulae because there really aren't any. Oh, sure, there are finite engineers that claim their comps are perfect but the best way to insure that yours really are is to build a simple flat board floating model with a half hard balsa paddle spun on a long rubber band like some of us did as kids. The board can be of pine with a crude 45 degree angle point on one end and a horseshoe on the other where the paddle goes. You may need one or two layers of pine board to support the weight of your paddle. Adjust your paddle to intersect the water as I described above and adjust until you are satisfied. If you are not familiar with these toys, ask someone over 50. The hand teaches the brain. When you are finished, give the experimental paddle to your grandchildren to play with. They will squeal with delight. If you need any help, I know that there are several crackerjack engineers in the club that would love to give you a hand.*



*Hope this helps. Boats are meant to be in the water. I would hate to see a pretty boat like this relegated to a shelf when she could bring so much pleasure with just a little fun redesigning. Who knows? Maybe this will lead to a whole new event of paddle boat races during Lighthouse Night!*

*One long whistle blast and two short! (River Pilot Salute)  
Capt. Robb*

Peak weather for the year is still here so time to get that boat on the water!!

John Bertelsen  
Commodore  
Edina Model Yacht Club

[www.emyc.org](http://www.emyc.org)

