

Procedure for Replacement of Lake Norman Keelboat Council Race Marks

(Please update info, contact detail, etc, as necessary)

**Lake Norman Keelboat Council permanent Race Mark locations** - GPS Coordinates shown in degrees/minutes/seconds. Depths shown are at full pond **and include allowance for an add'l 15+ feet of rode so the mark gives if hit by a motorboat.**

R – N 35 29 38.8 / W 080 57 15.7 / Depth (at full pond) = 34 ft, need 50 feet rode (3/9/17)

Y – N 35 29 36.4 / W 080 57 42.7 / 32, need 47 (3/9/17)

Z – 35 30 49.9 / W 080 53 37.2 / 27, need 40 (3/9/17)

B – 35 26 22.3 / W 080 57 28.8 / 60, need 75 (4/9/17)

C – 35 31 45.4 / W 080 54 04.9 / 35, need 50 (3/9/17)

X – 35 26 18.3 / 80 56 59.2 / 60, need 70 (4/9/17)

**Materials needed -**

**Marks** – Contact Rolyan Buoys (888-269-2869) / PO Box 886, Cedarburg, WI 53012 / <http://www.rolyanbuoys.com/index.htm>. LNKC Account # 66258

Buoy Model #1452 with 3" reflective blue tape band at top and below letter. Letters are to be 12" tall and also in reflective blue tape.



**Ground Tackle** – West Marine Rigging, Rock Hill, SC - 1-888-447-7444 / <http://www.westmarine.com/rigging/> 860 Marine Drive, Suite 581, Rock Hill, SC 29730.

Obtain appropriate length of ¼ inch stainless steel cable needed for anchoring, to be finished on each end with stainless thimbles (West Marine # 126813). They can have orders delivered to the Cornelius store.

Other –

- 2 foot and 1 foot lengths of ¼" stainless steel anchor chain
- One stainless steel 3/8" U-Bolt Bow Eye (fig. 1) – Available at Lowe's
- One 5-gallon bucket
- One 80 lb. bag of concrete
- Two 5/16" stainless steel shackles (West Marine #Fasco 6596S ?)
- Stainless steel monel seizing wire for shackles (West Marine # 127854) for locking shackles

Indelible pen – Label each Mark with a phone number of a responsible person to be called in the event the Mark is broken loose, washes ashore, and is found.

**Procedure:**

Attach 2-foot length of anchor chain to the 3/8" U-Bolt Bow Eye as shown in fig. 2.

Mix concrete according to directions.

Hang bow eye with chain into bucket (fig. 3) and pour concrete to surround chain, using it to anchor the bow eye in the concrete...Alternatively, you can fill the bucket with concrete then press the chain far down into the concrete, allowing access to only the bow eye itself (fig. 4).

fig. 1



fig. 2



fig. 3



fig. 4



Use a shackle to attach the cable to the anchor via the u-bolt. Use the seizing wire to lock the shackle.

Run the 1 foot length of chain through the ring on the base of the mark and around the center pole. Use the other shackle to attach this chain loop to the cable and lock the shackle with the seizing wire.

Keep all receipts and forward to Treasurer (Tim Stokes) for reimbursement. For West Marine Rigging and Rolyan Buoys, you can get the amount of the bill and have the Treasurer send a check along with the order.

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