

## 2017 Cow Bay Regatta Notes (M242 Canadians)

### General Overview:

This year we saw variable conditions up the beach and offshore, mostly medium wind that required full on hiking in all but 1 race. As such, our 795 pounds worked out well (Michael, Jeremy, Rob, Ray). It definitely paid to check the wind offshore on the upwind and downwind legs.

We managed to win the event out of 18 boats and got all Good or Excellent starts out of the 9 races, which was a major contributing factor, unlike the NA's the prior year where the ratio was only 63% (5 out of 8 races, where 2 were Poor).

The wind was quite cold during the day and night due to the forest fire particulates screening the sunlight, and as such this haze contributed to the stronger winds because the water and land east of Cow Bay was chilled more than normal. But the 2<sup>nd</sup> part of the theory was that way up the Cowichan Lake Valley there must have been less particulates in the air, which caused the thermal engine to kick in via sucking in all the freezing cold air. The wind was therefore 10-12knots most races. The Doctor started to come in around 9:30am Saturday and maybe 10:45am Sunday.

Results and Regatta info can be seen here:

<http://www.cowbay-regatta.ca/2017/index.htm>

The current was flooding at Sansum Narrows at 10:28 on Saturday and 11am on Sunday. Low tide in the Bay was at 10:15 on Saturday and 11:01am on Sunday. However, the current on the beach was pretty neutral for a chunk of the day, and there was frequently a 0.5 to 1 knot offshore ebb for the first several hours of racing. We saw upwind speeds of 5.7 to 6.3 knots on starboard when offshore both days, versus a target upwind speed of perhaps 5.3-5.4 knots.

This ebb current situation was also in effect on the Monday at around 11am when I was transiting with the 242 to Scott Point. When I was about 500 yards west of the house with the dock, there was definitely a back-eddy. This makes sense given that the water is flooding down the Sansum Channel where it splits on either side of Separation Point, with the water flowing down towards Genoa Bay, and then curling back up the beach on the south side, aided by the 2 rivers. One person said they saw 1knot of current while racing on the weekend.

On Monday, out where the two freighters were parked, is where the tide line became visible (the separation point between the outflow current from Cow Bay and the inflow current going west thru Sansum Narrows). It was roughly at the point where I was 1000 yards offshore and ¾ mile east of the house with the dock

(basically directly upwind from Separation Point). The tide line curved back west all the way down to Separation Point.

The flood began at 11:37am Monday, and at 11:54am I finally crossed the tideline apex of the ebb current about 1 mile further east from the west freighter (and  $\frac{1}{2}$  mile from the east freighter), and about 500 yards northwest from Patey Rock. This shows how powerful and extensive the ebb outflow is, or can be, from Cow Bay.

Later in the day on Saturday the offshore flood current starting ripping into the Bay (almost 2 knots), but on Sunday we didn't see any flood current when we thought we should have – go figure.

The weather mark was generally 400 yards offshore from the house with the dock. As such, we never got tucked in tight to the beach near the dock like many years, but there were a few races where we did go in fairly far (but it was easy to over-stand at those times due to the geographic lift – we frequently eased sheets and sailed low and fast to the mark).

Wind strength both days was the over-riding factor: if boats got into lighter breeze anywhere on the course they died relative to boats that had 2-3 knots more airspeed, regardless of current factors.

### **Sail Settings & Boat Handling:**

In terms of sail settings, the jib was always at the light air car setting; the jib halyard was set for a hint of wrinkles; the jib was never boned in tight and was frequently eased somewhat (unlike the bone-on error in 2016); the main was max height; the outhaul was eased somewhat (3-4" gap) because we could handle the power; the mainsheet was set to fly the 3 lower telltales as much as possible; the traveler was fairly high to get the boom on centerline, which meant the trav car was usually above center.

In contrast, Alex Fox apparently bones his jib and main on super tight. His theory is that he wants to be able to point like crazy and use his foils to help him point more, which is reminiscent of what the boats in Los Angeles do.

One final note is that we did a lot of roll-tacking upwind in all conditions and it made a big difference: the boat literally blasts through the tacks, which helps immensely. We also experimented with roll-gybes downwind, which is something else to work on going forward.

### **The Start:**

The start line each day was once again roughly in front of the small beach house just west of Jeff Arndt's place. It was usually skewed anywhere up to 27degrees (1.5 kumquats) at the pin end, so much so that on Sunday were able to port-tack the

Fleet in the first race with Phil Cragg, and during one race on Saturday nobody could lay the line in the flood current – we were 2 boat lengths short of the line at the gun and had to flip onto port immediately and drive into the beach.

### **1<sup>st</sup> Upwind Leg:**

Generally speaking, for the first 3 races on Saturday, it usually paid to launch offshore from the start, but you had to reconnect with the beach to some extent, also generally speaking, just past Cherry Point, because that's where the geographic shift would start to take effect and boats would get big starboard lifts coming off the beach.

A general rule past Cherry was to not sail further offshore than north of a direct line from the windward mark down into the Bay due to the geographic shifts that will be talked about in more detail later on. Suffice to say that if you stayed offshore too long, you would miss out on the almost guaranteed starboard lifts that would kick in at the upper end of the course, like almost every other year. And if you didn't time the return to the beach properly, it would get real ugly very quickly. That said, as we experienced in Race 1 on Sunday, you have to go back into the beach in a puff, not a lull, or you get hammered, like we did. If we'd gone another 100 yards north to a visible strong puff and then tacked we would not have lost the 3 boats that we did in a very short period of time (Matt Collingwood, Phil&Reto, 115).

On Sunday it was quite good several times offshore at the beginning, but then it became apparent in later races that the beach was where it was at. In a number of races it paid to flip onto port right away after the start and drive right into the Cherry Point Marina due to the wind angle and presumably some current effects and stronger wind (It was almost certainly mostly due to the progressive header on port that converted into a progressive lift on starboard once we emerged from behind Cherry Point).

Even a 27-degree offshore end favoring of the start line was not enough to overcome the advantage of getting to the beach first, which we have seen in multiple past years – it's like the sirens calling the sailors towards the rocks where they would dash their boats to pieces. Just don't do it...

As a perfect example, in the 5<sup>th</sup> race on Saturday, we had an excellent clean air, full speed start at the heavily favored pin end, and our plan was to flip onto port right away at the gun. However, we were half a second late doing so relative to 127 on our starboard hip, who in turn were fractionally late relative to Alex Fox and then Matt Collingwood (who tacked first).

As a result we slowly lost the drag race to the beach amongst the 4 boats, who just sailed right through our lee (Matt got there 1<sup>st</sup>), and we then had to engage in a massive group tacking duel around Cherry Point, where we were forced to undertake counter-phase tacking to try to keep clean air, but we still ended up

getting ping-ponged relentlessly. At least we crawled back to 4<sup>th</sup>...It could have been much worse – we were probably in 8<sup>th</sup> to 10<sup>th</sup> at one point.

This makes sense because Cherry Point is near the epicenter of the geographic shift that occurs as you move up the Bay from the Government dock all the way up to the windward mark, probably as much as 45 degrees. Much like the Kits-to-Point Grey phenomena in Vancouver in a standard westerly.

The next steady current phenomena we noticed was that just past Cherry Point it made sense to not immediately dig into the beach because we would be sailing head-on into the current that was trying to bend its way around Cherry Point. It was better to tack into shore on port when we were about 4-5 lengths past the Marina.

Lastly, about 100-150 yards past Cherry Point was where the true geographic shift epicenter is located, and it extends another 200-300 yards east. At the middle of this low-wind epicenter is a large square hedge on the beach. This area had to be avoided at all costs upwind and downwind, because any boats that sailed too close to the shore in this 300-400 yard zone got themselves vapor-locked. About 150-200 yards offshore was the beginning of the danger area, and it would get really bad really fast the closer you got. The telltale sign re wind strength in the vapor-lock zone was whether or not the water looked “glassy” when it was observed from a long way away. If it was, there was no wind there...

### **Downwind Leg:**

On the downwind leg it almost always paid to do a no-pole hoist & gybe right at the windward mark, drive into the beach (but not as far in as the vapor-lock zone), gybe onto starboard to get past Cherry (passing maybe anywhere from 100-150 yards offshore and aiming well north of the start pin), and gybe onto port at Cherry to drive down the beach to the finish line area. In this manner we got the most wind strength and were also playing the geographic shift down the run.

But you had to avoid the glassy zone on the beach, or you could get screwed (like many boats did who dug into the beach). On occasion we would get within 5 yards of the death zone, feel the wind start to die, and we would gybe out of there just in the nick of time.

The wind definitely re-attached to the beach just past Cherry, such that we would “sail into the breeze” (which materialized around us out of nothing in a bizarre way), and accelerated down the beach from there (while curving slowly all the time), which was a tad weird because it was only 200 yards west of the end of the dead zone. But it was there pretty much every race. The beach paid off 90% of the time downwind.

A telltale sign re wind strength was all the flags flying at Cherry and also on the 2 Committee Boats (*note for next year – use the binoculars!*).

By the way, on occasion we would round the weather mark on Saturday in good breeze and strong flood current and drive offshore for a while on starboard gybe, but we almost always flipped onto port and drove into Cherry at some point because of the geographic wind curve that was always there.

At the low bank, shallow area near the finish line Committee Boat was where it paid to drive into downwind on port, and then flip onto starboard right at that point because the geographic header would kick in all the rest of the way to the leeward mark.

One major note re the lead up to the starboard gybe at the finish line boat: rather than trying to force the boat to sail lower on port gybe (thus fighting against the geographic curve that was kicking in more and more as we progressed down the beach), it was better to sail higher and faster and accelerate into the curve at a quicker pace. And given that the wind would frequently puff and lull, this was all the more reason to sail higher in the lulls and not force it down too much in the puffs. In this manner, we would get to the optimal gybe point much faster, and when we would eventually gybe onto starboard the curve would keep on working in our favor all the way to the leeward mark, which we would easily lay at that point.

With this in mind, generally speaking, going offshore around the start line downwind got pretty ugly pretty fast, mostly due to the 2 factors mentioned above: the geographic shift and stronger wind inshore. Stronger current offshore did not overcome these two factors. The few early races on Saturday when we went outside the pin turned out to be painful – we lost Alex in one race and 127(?) in another.

At the bottom of the Bay the wind really starts clocking to the north at times, particularly in the last 200 yards. After gybing onto starboard at the finish line area the pole goes from being all the way aft on port gybe to fairly far forward on starboard (and even pole-on-forestay at times) by the leeward mark. The wind also accelerates in the bottom of the Bay, so it is a rich-gets-richer kind of deal if the last gybe is timed right.

We actually got nipped at the leeward mark in two races by Alex Fox because he was to our north both times (one of which we had paralleled him for almost the entire latter half of the downwind leg) and he caught a puff of wind and accelerated ahead of us both times, breaking the overlap at the last second (Matt Collingwood was with him in one of the two races and we lost him too even though we had a solid overlap on both boats).

This, in spite of the wind shadow of the two boats being ahead of us, so theoretically we had lots of clean air, plus we had a solid overlap, but it didn't matter. So when going downwind make sure the other boats' spinnaker wind shadow is not in front of ours or we lose the ability to go up and catch the heading, stronger puffs, and we

thus become trapped and vulnerable. This is a fairly consistent phenomenon across the years, by the way.

Conversely, you don't want to be too high going into the leeward mark, because in one race we lost 127 who had sailed further into the beach than we did, so they approached the leeward mark at a hotter angle to leeward of us.

### **2<sup>nd</sup> Upwind Leg:**

The trick on the 2nd upwind leg is to just stay in the breeze, knowing that it will slowly head you on port tack as you go into the beach, and simply cover the boats behind. They will usually very slowly fall into us on port tack due to the very slow heading phenom. Occasionally it paid to tack offshore into clean air clear of the spinnakers, but not to go too far. There were no holes on the beach this year.

### **Summary:**

In summary, this was a somewhat atypical Cow Bay weekend (much like 2016, which was also an anomaly relative to the prior 8 or so years) in that the "race to the beach" was not the standard move each race, and you really had to sail "heads up" all the time and evaluate the changing conditions all across the course.

Sometimes it was a drag race to the beach to get in behind Cherry Point, launch out, and then tack back into the beach again, but not very often, especially since the vapor-lock zone was in play east of Cherry. As such, in those cases it could frequently then pay to loop offshore and stay in stronger breeze.