

**Spring Season Begins:  
March 29th****Forms available on-line:**

- **Membership agreement and waiver**
- **Registration form**

[www.rowalexandria.com](http://www.rowalexandria.com)

**Run v Row:  
March 27th****Mar 9, 2004  
Steering Committee Meeting Snapshot**

- **Teams should designate a "rep" to take uniform orders, which will be made after 4/16/04.**
- **ACR cash flow is better than projected because we haven't yet paid for boat purchases.**
- **Registration was a success with 154 registered rowers.**

**2004 Registration a Whopping Success**

It was quick, easy, and resulted in over 154 registrations! Thanks to the handiwork of Sally Reams and Kat Gonyea, this year's registration process was greatly streamlined! Sally and Kat redesigned multiple registration forms and combined them into one, thus creating "one-stop shopping" for registration! Kat then posted the forms to the website for easy access and advance preparation!

**Do You Know Who to Ask?**

You can go to the website and identify Steering Committee (SC) members and their responsibilities. But just to clarify, here's a list of frequently asked questions and answers to..."Do you know who to ask?"

1. Who can answer questions about ACR's various programs, the requirements, and coaches? *Sally Reams, Programs Dockmaster*
2. Who do I talk to about the overall operations of the boathouse--rack rental, space for my single, improvement efforts, access to boathouse, loose boards on the dock, etc? *John Vestal, Operations Dockmaster*
3. Who is the liaison between ACR and ACB? *Chuck Linderman, Administrative Dockmaster*
4. Who is the wisest, most knowledgeable person in ACR and can recite its history standing on one foot in his shell with both eyes closed? ☺ *Royce Drake, Dockmaster Emeritus* (He is also very handy with design and a saw—shed design, new oar racks, and much much more.)
5. How do I get the Steering Committee to listen to issues regarding a particular program? Simply go to your program representative, who will bring up the matter with the SC: *Dan O'Connell (Men's Open Sweep); Karen Snyder (Women's Open Sweep), and John Werbowski (Sculling)*
6. Who handles the money? *Accountants, Sharon Jacobson and Wanda Street*. They also set up payments by credit card and report monthly on the financial condition of the club.
7. Who sends out dozens and dozens and dozens...of e-mails, updates the membership list, has ACR stationery, and publishes the "Sliding Seat?" *Betsy Mead, Secretary*
8. Who single-handedly leaps over broken shells; repairs, repairs, repairs; adjusts foot stretchers; replaces shoes, nuts, and bolts and more? *Peter Stramese, Equipment Maintenance*.
9. How do I get repairs made to a shell? Contact your program coach and/or leave a message on Pete's locker.

- **The ACR handbook and related documents need to be revised for clarity.**
- **Chris Idler presented ideas for a race coordinator's web site, which would simplify the ACR race registration process—it would include race dates, costs, boat loading and unloading times.**
- **Major renovations to the shed are complete.**
- **Some maintenance is required before spring season begins; we will notify rowers.**



## The Final Ten Degrees: Pulse Steering vs. Constant Steering -- The Debate

posted on February 20, 2004

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*"Move most gently if move you must."  
-- William Butler Yeats*

The debate on the merits of pulse steering (steering only when the oars are in the water) versus constant steering is a long-standing one. So many readers have emailed me with questions about the relative merits of the two styles, that – at the risk of embroiling this column in controversy -- here are some by no means definitive thoughts on the subject.

It used to have the weight of a law of physics that coxswains steered only when the oars were in the water in order to avoid affecting the set. (Heaven help you if your stroke ever saw the knot move during the recovery.) This is no longer the hard and fast rule it once was. (My apologies -- in advance -- to any coaches who may have spent last season drilling pulse steering into their coxswains' heads, only to have me introduce heretical notions.) Most coaches I have asked about it have said they had no hard and fast policy...as long as the steering was minimal.

The effect (negative) of the rudder on the set becomes more pronounced the farther the rudder turns. The increase from 45 degrees to 50 degrees is a lot more destabilizing than the increase from 20 degrees to 25. In most crewshells, the rudder turns through an arc of approximately 60 degrees on either side of neutral. While such a large arc is great for video games, or even perhaps for maintaining a geosynchronous orbit, this is far more than a cox normally needs. The final 10-15 degrees are the most catastrophic to the set. Except in "iceberg right ahead" types of emergencies, or end-of-the-lake turnarounds, never use them. 25-30 degrees of rudder will very likely be almost unnoticeable to your rowers, while a sharp pulse hard over -- whether the oars are in the water or not -- will dump the boat to one side. The lighter the boat, the more effect a sharp rudder angle has. For that reason, coxswains of lightweight and women's crews may especially want to consider gradual steering, while pulse steering might be best for heavyweight boats and -- through some quirk of physics -- bowloaders.

This being said, pulse steering is probably the best way to start out -- if for no other reason than it imposes a kind of discipline on the cox. As you become more experienced, and develop a feel for your particular boat, experiment during practice to see which works best. The goal is to use so little rudder that no one notices whichever style you use. If you discipline yourself never to put the rudder more than halfway over -- hopefully less -- you will be well on that road (and your stroke will feel less compulsion to duct tape both your hands to the gunwale).

Alexandria  
Community  
Rowing  
P.O. Box 16431,  
Alexandria VA  
22302  
703-836-1151

Launch Driver  
Training:  
March 27<sup>th</sup>  
11 AM at the  
BH!

Boy Scout Merit  
Badge  
Requirements for  
Rowing

[http://www.merit  
badge.com/bsa  
/mb/098.htm](http://www.meritbadge.com/bsa/mb/098.htm)

Are you a new  
member? Need a  
club orientation?

Contact Cathy  
Hott  
([caih@cox.net](mailto:caih@cox.net))  
or John  
Werbowski  
([John.Werbowski  
@baesystems.com](mailto:John.Werbowski@baesystems.com)  
m)

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The Coxswain  
Café

This website is  
dedicated to the  
education of  
coxswains at all  
levels of the sport.

[http://www.cox  
swaincafe.com/](http://www.coxswaincafe.com/)

Worse than any damage the rudder can do is the damage to the set is caused by coxswains leaning into their turns as if they were banking an airplane or a bicycle. This is a seductively easy habit to get into -- even for experienced coxswains -- because one tends to be looking in the direction of the turn anyway. The head, then the body, naturally follow the line of sight, and the next thing you know there's a gallery full of Head of the Charles or Belly of the Carnegie pictures showing coxswains leaning into their turns like slalom skiers.

Slack tiller ropes will exacerbate oversteering. (And oversteering will exasperate your coach.) Tiller ropes stretch, especially the nylon ones when they get damp. Tightening them periodically will help make your steering more precise. The wire steering cables in bowloaders usually have a little clamp near the tiller capstan which makes tightening them simple.

The short answer to the pulse vs. constant steering debate ultimately is: steer however your coach and your stroke tell you to. And steer little. *Submitted by Deanna Volker. Source:* <http://row2k.com/columns/index.cfm?action=read&ID=151>

## FAQ: Basic Physics of Rowing

1. Propulsion
  - o Why does the blade *have* to slip in the water? (when it *doesn't* if you push off a solid object?)

### Propulsion

A boat accelerates through the action/reaction principle ([Newton's 3rd Law](#)). You move water one way with your oar, the boat moves the other way. The **momentum** (=mass x velocity) you put into the water will be equal and opposite of the momentum acquired by the boat. Consider a boat before and after a stroke.

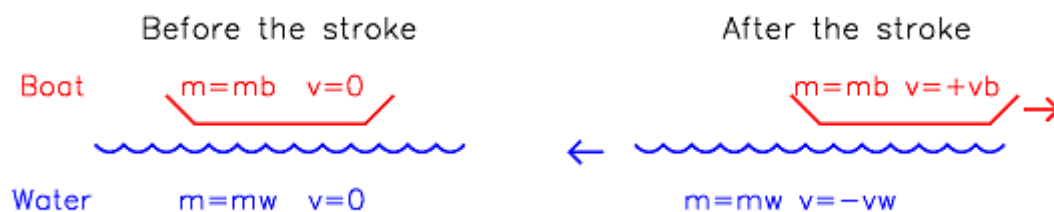


Figure (1.1)

Before the stroke, total momentum  $p = 0$ , since everything is at rest.

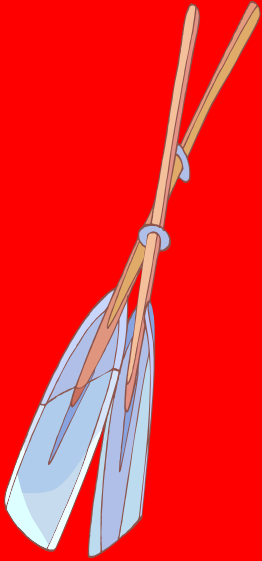
After the stroke, total momentum:  $p = m_b v_b - m_w v_w = 0$  because the total momentum can't change ([Newton's 2nd Law](#)).

E.g. for a boat+crew mass  $m_b = 100$  kg (i.e. a single sculler) to accelerate from rest to  $v_b = 1$  m/s, requires either  $m_w = 10$  kg water to be accelerated to  $v_w = 10$  m/s, or  $m_w = 20$  kg water to  $v_w = 5$  m/s, or any other combination of  $m_w$  and  $v_w$  that gives the product  $m_w v_w = m_b v_b = 100$  kg m/s.

During the normal stroke (i.e. with the boat already moving) it is less obvious that water is moved backwards in order to keep the boat moving forwards since the blades appear to 'lock' in where they are placed, but if you look at the puddles when the blades are extracted it's clear that water is moved. There *has* to be some slippage in order to accelerate the boat, although, from energy considerations ([section 3](#)), this should be made as small as possible.

So what about if you push off the bottom of the river, or a series of poles planted along the river bank, rather than the water? (I hear you ask). Well, in that case the whole planet moves backwards

Can't find something on the website? Click on the **Site Map** and you'll find the index!



instead, and some slippage still occurs (as detected by a very pedantic spaceman with implausibly precise measuring equipment).

- [Mathematical Model](#) (*Leo Lazauskas*)
- [Back to Contents](#)

Find out more about the Basic Physics of Rowing at: <http://www.atm.ox.ac.uk/rowing/physics/>



## Thank YOU!

The ACR community is fortunate to have so many rowers dedicated to maintaining the facilities and equipment. Of special note, please thank

- **Peter Stramese** for fixing the addition floor, and prepping the fleet for the upcoming season;
- **Royce Drake** for his effort in redesigning/rebuilding the shed;
- **Frank Fraser** for his efforts in blade rehab: sanding, cleaning, painting; and
- All the good people who helped in the blade rehab project—Frank was particularly impressed with the number of people who helped on a consistent basis.

# Steering Committee Minutes

February 10, 2004

Website information:

[kgonyea@acl.com](mailto:kgonyea@acl.com)

Sliding Seat  
information:

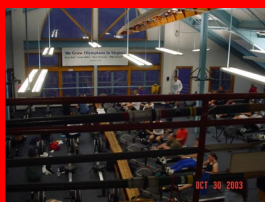
[betsymead31@starpower.net](mailto:betsymead31@starpower.net)

E-mail information:

[betsymead31@starpower.net](mailto:betsymead31@starpower.net)

We're on the Web!

[www.rowalexandria.com](http://www.rowalexandria.com)



Please e-mail  
suggestions, article  
contributions, etc. for  
the Sliding Seat to:

[betsymead31@starpower.net](mailto:betsymead31@starpower.net) or [acr-secretary@lists.rowalexandria.com](mailto:acr-secretary@lists.rowalexandria.com)

- Two representatives (Kathryn Hamilton and Marion Major) from the women's 5-Day Sweep Program presented a proposal for raising funds for the down payment of a new boat. The SC supported their efforts to raise funds, but stipulated that the boat, when purchased, will belong to ACR. The team is considering having a yard sale, among other fundraising initiatives. John Vestal noted that he would like to revisit the ACR boat purchase plan to determine when the down payment is needed, and when ACR can afford to assume the remaining payments.
- Finances remain relatively stable with little activity. We are slightly under budget because of winter training.
- Sally Reams was putting the finishing touches on the 2004 programs, registration forms, and the registration process, which enable rowers to pay by check, credit card, and Pay Pal. She announced that Jaime Rubini would be coaching a men's 5-day competitive sweep team; competitive sculling will be divided into two groups with coaches Duncan Morhardt and new coach Tom Sciafres; Terry Grindstaff will continue to coach Sculling 2. She also stated that coaching assistants (who would cox, drive launches, and perform other duties as directed by the coaches) could be compensated for their efforts.
- Betsy Mead discussed more survey results and provided highlights. One area of particular concern was the maintenance of the boathouse. (Note: During the March 7<sup>th</sup> registration, Steve Weir addressed the City of Alexandria's responsibilities for maintaining the facilities, including rest rooms/showers).
- Peter Stramese told us he has received the insurance settlement on boats damaged by Hurricane Isabel. We sustained about \$6200 in damages. An anonymous donor provided funds to replace one of the boats. Of note: Steve Weir completely rebuilt and painted the Rosemont, whose hull had been severed. The Drake will be replaced with a Vespoli lightweight 2x prototype; the Shuter's Hill is in New Haven, CT being repaired. It is expected back in the boathouse before spring season begins.
- Royce Drake discussed the status of repairs to the shed, which include a new roof and racks. The work should be completed by the start of the spring season. He provided photos to show the construction, repairs, and progress that had been made. Unfortunately, the reconstruction cost more than expected.
- The spring season begins March 29<sup>th</sup>.

Winter snow on the  
dock

