



2018-19 Handbook

v1.0

March 2019

Table of Contents

Program Mission	2
Program Goals	2
Club Operations	3
Norcal Crew Website	3
Fees and Expenses	3
Financial Aid	3
Travel Related Expenses	4
Fundraising Commitment	4
Team Apparel	4
Car Traffic and Parking at BIAC	5
General Team Communications	6
Coach Relations and the Parent Liaison	6
Norcal Crew Parent Volunteer Positions	7
Team Practice Schedules	8
Competitive Team Racing Schedule	9
Coaching Staff	10
Parent Volunteer Committee Chairpersons	11
Board of Directors	12
Understanding the Sport of Rowing	13

Program Mission

Norcal Crew's mission is to provide High School and Middle School rowers of all backgrounds the opportunity to learn to row and ultimately compete at a national level, in an environment that nurtures development of character, strength of commitment, and passion for excellence.

Norcal strives to provide a comprehensive training program in order to strengthen its student-athletes' personal development. It is the team's goal to foster a sense of team spirit while helping athletes develop both physical and mental strength and broaden their horizons as they learn to trust and support teammates while establishing their own sense of confidence and commitment.

Program Goals

- Provide rigorous physical training and fitness that permits the maximum athletic development of each individual rower.
- Develop each rower's character in dealing with difficult and strenuous training, competition, and adversity through persistence, determination, and commitment.
- Compete at the top level of youth rowing both regionally and nationally.
- Provide excellent coaching and training in the fundamentals and techniques of rowing.
- Develop a sense of shared purpose, commitment, and teamwork.
- Develop a discipline of training so that the individual rower will take personal responsibility for obtaining the maximum fitness through exercise and good nutrition.
- Achieve success by demonstrating that a successful crew is one where all individuals are working towards a common goal.
- Adopt a personal goal to achieve proficiency in athletics as the basis for lifetime fitness, self-esteem, and good health.

Club Operations

Norcal Crew Website

www.norcalcrew.org

The Norcal Crew website is a valuable source of information about the Norcal Crew and the sport of rowing. The site includes: general team information, coaching staff, news articles, race results, and contact information. The website also includes links to various rowing resources, information on rowing at a collegiate level, and tips on how to watch a race.

Fees and Expenses

The tuition fees to row with the Norcal Crew for the Fall and Spring 2018-2019 are as follows:

Varsity Racing Team Tuition (per season, Fall and Spring)	\$1,750
Novice Racing Team Tuition (per season, Fall and Spring)	\$1,750
8 th Grade Development Program (per season, Fall and Spring)	\$1,350
Recreational Program (per season, Fall and Spring)	\$1,050
Trial Fee (Novice, 8 th grade) (two week trial, to be credited against season tuition)	\$200

The Norcal Crew is a Non-Profit 501(c)(3) Organization. Our members and volunteers work hard to keep our fees as low as possible. The membership fees cover:

- Approximately 15 hours per week of expert coaching
- Regatta expenses for local/single day regattas
- Transportation to Sacramento regattas
- Hotel for Southwest Regional Championships
- End-of-year banquet attendance for all athletes
- The purchase and maintenance of top-flight equipment
- BIAC Membership
- Liability insurance.

Membership fees do NOT include the required membership in USRowing (\$35), wet-weather gear, uniforms, or some travel related expenses. Below, you will find the estimated costs of these items.

A full year of participation is estimated to cost between \$5,000-\$5,500 for the average rower. This includes the dues plus costs associated with certain select regattas and events. The actual cost will vary: senior crews and top boats go to more events, many of which involve travel. For example, those rowers who qualify to attend the Head of the Charles and Youth Nationals should expect to pay approximately \$1500 to \$2000 travel costs per event. Please see below for an estimate of travel costs for the various regattas we attend.

Financial Aid

Norcal Crew is committed to extending the benefits of rowing to as many athletes as possible. Need-based financial assistance is available for qualified applicants. Financial aid awards have no effect on the Competitive Team selection process. All information submitted is kept confidential and is only viewed by the Scholarship Committee. Coaches do not participate in the award process, and are not aware of who has received awards. For additional information please refer to the Norcal Policies and Rules of Conduct Manual, Financial Aid section and online at <https://norcalcrew.org/wp-content/themes/norcal-crew/forms/NorcalCrewFinancialAidApplication.pdf>

Travel Related Expenses

Norcal Crew is a competitive rowing club, and our athletes will compete in regattas throughout the state of California, as well as the Northwest and East Coast. Every year our ultimate goal is to send qualified boats to the US Rowing Youth Nationals. Away regattas are a great opportunity for athletes, as they not only get to test themselves in races against the top clubs in the U.S., but also deepen friendships with their teammates, learn self-sufficiency, and create memories that last a lifetime.

Membership fees for the fall and spring seasons cover travel expenses to most Bay Area events. However, during each season, there will be several regattas for which rowers will be invited to compete. Travel fees for these events will be charged separately and only to participating rowers. Regatta fees for these events will be provided in a race announcement prior to the event.

Norcal Crew strives to keep travel costs as low as possible. The travel fees noted below are approximate, based on the costs of the last several years and are subject to change due to costs of airfare, hotels, rental vans, etc.

Regatta	Approximate Cost
Head of the Charles (select crews)	\$1,500-\$2,000
Head of the Lake (select crews)	\$500-\$650
Men's/Women's Training Trip	\$400
San Diego Crew Classic (select crews)	\$650-\$750
USRowing U15/U17 National Championships (selected U17 crews)	\$1,500-\$2,000
USRowing Youth Nationals (selected Varsity)	\$2,000-\$2,500

Fundraising Commitment

Effective fundraising is necessary for Norcal Crew to provide the extraordinary lifetime experience for our youth rowers, as well as compete with the top crews in the Bay Area and throughout the U.S. Fundraising allows us to maintain fees as low as possible and still make necessary capital purchases, provide scholarships, and provide competitive coach's salaries.

Our goal in 2018-19 is to raise \$150,000-200,000, to invest in new capital equipment, including racing shells and rigging, wakeless launches, oars, and stationary bikes. Donors can get the opportunity to name boats. Contact the Executive Director for specifics. Our top priority is to have 100% participation of all Norcal families in our fundraising activities. We hope that each family can contribute at least \$475 (either through solicitation or personal donation). We have created giving levels, and will recognize the generosity of our donors appropriately.

Norcal Crew is a tax-exempt organization under IRS Section 501(c)(3). The organization's Tax Identification Number is 46-0612640. Many Bay Area corporations strongly encourage their employees to give to the community with matching grants. Your company may be one of them.

Norcal Crew can also accept stock/equity based gifts. Contact the Executive Director if you would like to know more.

Team Apparel

Required Team Gear / Uniform:

Every rower is required to purchase a racing uni, which is a one piece uniform that will be worn for all regattas. This costs approximately \$75. Other optional customized clothing such as rowing jackets and pants are also

available to order. It gets very cold out on the water, especially in the winter, so we need to ensure that rowers are adequately protected from the elements. We order high-quality garments at a competitive cost. Team uniforms are ordered at the end of the final registration period in the fall season. One practice day is set aside specifically for measurements and questions. A coach will be available to assist the athletes with any sizing needs. There will also be an opportunity to order uniforms in the spring; however, it is encouraged that you place your order in fall.

Norcal Crew contracts with JL Design for all uniform orders. Once you have received your measurements, a link to JL Design will be provided in the Norcal Crew email newsletters. All orders must be placed online through the JL website. There will be an opportunity for rowers and parents to order additional gear at this time. Please see the Executive Director for any questions regarding uniforms.

Car Traffic and Parking at BIAC

BIAC's Maple Street location, combined with common arrival and departure times for large groups, causes some issues with traffic flow and parking.

Safety is everyone's responsibility - Masters, Juniors and parents alike! Please do your part and adhere to the following traffic and parking guidelines.

Maple Street is used by many people who live and work past BIAC at Docktown or other businesses. Understandably, they get frustrated by having access to their homes blocked every day. I have witnessed frustrated drivers speed past the front of BIAC's gates, narrowly missing people crossing the street ("road rage" style). So please realize – **the parking situation is not just a hassle, it also creates a serious safety issue for us and our children.** We would all like to avoid losing anybody – so I'm asking your help.

To that end:

- DO NOT STOP IN THE STREET in front of BIAC to drop off/pickup. Pull completely off the street before stopping. There is a wider place next to the building and just past it where you can pull to the side to let people in or out - briefly!
- DO NOT PARK IN THE STREET. There is usually parking available around the corners to the north or south on Maple Street, please find a space if you need to park and wait. Parents - your kids will find you.
- DO NOT PARK ONLY HALFWAY OFF THE STREET. Pulling only halfway off the street does not allow both lanes to flow, it's the same as parking in the street. Please pull all the way off the street when you park.
- DO NOT MAKE A U-TURN JUST AFTER THE MAPLE ST CORNER. It is a blind corner and people coming around can't see you. And it jams up traffic. Travel through to the Docktown end of Maple Street where there is a little more space and (carefully!) turn around there.
- CARPOOL when possible.
- PARENTS, TALK TO YOUR KIDS. Emphasize as pedestrians they to keep their eyes open and away from their phones in this area. For those who can drive, emphasize their responsibility to use care in this crowded area.

BIAC's and Norcal's relationship with the community, and our ability to remain where we are, depends on us being reasonable neighbors. Please do your part to respect our neighbors and other user groups and let's use some common sense and manners to mitigate the traffic before and after practices.

Finally, if you see someone exhibiting the dangerous behaviors above, please help by kindly and politely reminding them that it worsens the traffic for all of us and to please find a better spot to park or turn around.



General Team Communications (Coach, Parent, and Athlete)

Almost all communication between executive director, coaches, board members, parents club leaders, parents, and rowers is done through email. Please use e-mail as the first effort to contact all Board members, volunteers or Norcal coaches. The email addresses provided during the registration process are automatically added to our email database. If you are not receiving email correspondence from the Norcal Crew, coaches, and/or team parents, it is possible that your email address has been incorrectly captured by our database or your email address has changed. Please email the executive director with the correct/updated information.

Coach Relations and the Parent Liaison

An important goal of the club is the development of a strong and mutually respectful relationship between Coach and Athlete. With this goal in mind, we encourage athletes to take the lead in their role and participation on the team, with parents playing a secondary, or background role. We hope that most of the time, our athletes can represent themselves in a mature and effective manner. However, in the event that a parent feels it necessary to get involved for any reason, we strongly encourage contacting the Parent Liaison member of our Board of Directors. This Parent representative is Eric Warner. He is tasked to act as an unbiased, experienced, "middle man" between all concerned parties. He may be contacted by telephone or e-mail with any questions, concerns, or comments regarding the coaching staff, coach/rower, or coach/parent relationship, and/or your child's placement in a boat. All matters will remain confidential.

Norcal Crew Parent Volunteer Positions

Our coaches and Executive Director are the only paid members of our club. In an effort to keep expenses as low as possible, we rely on dedicated parents and patrons as volunteers to fulfill many crucial and necessary jobs. Below you will find a description of the volunteer positions and committees available within Norcal Crew. All parents are expected to volunteer for a minimum of 10 hours per year. We hope that parents benefit from volunteering too by getting to know each other, staying connected with their kids, and learning about this intriguing sport!

Job Title	Description
Parent Committee Chair/Regatta Captain	Lead coordination of Parent Support for Norcal events and regattas; Coordinate with leadership team to determine food donations, shift times, and misc. needs specific to each regatta. primary point of contact for Executive Director for parent support needs.
Co Chair of Parent Committee/ Communications Captain	Communications: Send out updated Volunteer Sign Up emails with job descriptions for each regatta and team events. Coordinate with leadership team to determine food donations, shift times, and misc. needs specific to each regatta. Point person for questions pertaining to volunteer jobs. Helps oversee annual events for Norcal as co-chair of parent group.
Awards	Help prepare awards for graduation seniors and 1st year varsity rowers; bring to Banquet
Food Captain	Fall and Spring season: Assist leadership team in planning food menus, developing shopping list to share with volunteer coordinator and manage food prep at each regatta.
Supply Trailer "The Harley" Towing	Tow supplies trailer, when needed, to and from specific regattas.
Inventory Planning and Management Captain	Fall and Spring seasons: Assist leadership team in regatta preparation by maintaining inventory in equipment bins in the Harley trailer, forward shopping lists to volunteer coordinator, check and pack equipment in and out before and after each regatta.
Marketing & PR	Fall and Spring season: Responsible for marketing and branding Norcal campaigns. Create digital and print campaign materials, announcements to local papers/websites.
Novice Parent Social	Organize and host novice parent social in private home or local business. (September)
Parent Table	Organize coffee/tea and a small selection of food for Parents at the Norcal tent during Regattas.
Photographers	Fall and Spring season: Staff each regatta as a dedicated photographer; help ensure yearbook editor has all photos needed.
Season Social Planning	Organize parent or team social events to be held at the boathouse, people's homes or other locations.
Social Media	Keep Facebook and Instagram accounts updated with regular posts?
Spring Banquet	Plan/organize all squad/ family year end celebration and recognition event in May.
Varsity Parent Social	Organize and host varsity parent social at private home or local business (September)
Website	Work with Executive Director to develop, manage and maintain Norcal's website.
Yearbook	Fall and Spring season: coordinate with photographers, layout yearbook, secure printer and distribute

Team Practice Schedules*

FALL PRACTICE SCHEDULE (August 27 to December 21)

Team	Weekday	Weekend
Novice Women	Monday, Tuesday, Thursday, Friday 4:20-6:50 p.m.	Saturday 8:30-10:30 a.m.
Novice Men	Monday, Tuesday, Wednesday, Friday 4:20-6:50 p.m.	Saturday 9:30 a.m.-12:30 p.m.
Varsity Women	Monday, Friday 5:00-7:00 a.m. Tuesday, Wednesday, Thursday 4:10-6:40 p.m.	Saturday 7:00-10:30 a.m.
Varsity Men	Tuesday, Friday 5:00-7:00 a.m. Monday, Wednesday, Thursday 4:10-6:40 p.m.	Saturday 7:30-11:00 a.m.
8th Grade Prgm	Tuesday, Wednesday, Friday 4:00-6:00 p.m.	Saturday 11:00 a.m.-1:00 p.m.
Rec Program	Monday, Friday 4:00-6:00 p.m.	Saturday 11:00 a.m.-1:00 p.m.

SPRING PRACTICE SCHEDULE (January 7 to May 10)

Team	Weekday	Weekend
Novice Women	Monday, Friday 5:00-7:00 a.m. Tuesday, Thursday, Friday 4:10-6:40 p.m.	Saturday 8:30-11:30 a.m.
Novice Men	Monday, Tuesday, Wednesday, Friday 4:20-6:50 p.m.	Saturday 9:30 a.m.-12:30 p.m.
Varsity Women	Monday, Friday 5:00-7:00 a.m. Tuesday, Wednesday, Thursday 4:10-6:40 p.m.	Saturday 7:00-10:30 a.m.
Varsity Men	Tuesday, Friday 5:00-7:00 a.m. Monday, Wednesday, Thursday 4:10-6:40 p.m.	Saturday 7:30-11:00 a.m.
8th Grade Prgm (1/8 thru 3/31)	Tuesday, Wednesday, Friday 4:00-6:00 p.m.	Saturday 11:00 a.m.-1:00 p.m.
Rec Program (3/1 to 5/31)	Monday, Friday 4:00-6:00 p.m.	Saturday 11:30 a.m.-1:30 p.m.

*NOTE: Practice times approximate and subject to change

2018-19 Competitive Team Racing Schedule (tentative)

Date	Event	Location	Teams Attending	Transport Provided	Additional Cost
Oct. 20-21	Head of the Charles	Charles River, Boston, MA	Select	Air/Bus/Van	Yes (~\$1,675)
Oct. 27	Head of the American	Lake Natoma, Rancho Cordova	All Teams	Bus/Van	None
Nov. 4	Head of the Lake	Lake Washington, Seattle WA	Select	Air/Bus/Van	Yes (~\$500)
Nov. 10	Head of the Lagoon	Foster City	All Teams	None	None
Jan. 17-21	Men's Team Training Trip	UC Davis	Novice Men Varsity Men	Bus/Van	Yes (~\$375)
Feb. 14-18	Women's Team Training Trip	UC Davis	Novice Women Varsity Women	Bus/Van	Yes (~\$375)
Feb. 16	Pacific Novice Regatta	Lake Merced, San Francisco	Novice Men	None	None
Feb. 23-24	Faultline Faceoff	San Pablo Reservoir, Orinda	All Teams	None	None
Mar. 10	Capitol Crew + Others	Lake Natoma, Rancho Cordova	All Teams	Bus/Van	None
Mar. 16-17	Shamrock Regatta	Redwood Shores, CA	MV8, MJV8 WV8, WJV8	None	None
Mar. 30	Pacific Invite	Lake Merced, San Francisco	All Teams	None	None
Apr. 5-7	San Diego Crew Classic	Mission Bay, CA	MV8, MJV8, MLtw8, MN8 WV8, WJV8, WN8	Air/Bus/Van	Yes (~\$630)
Apr. 6	510 Sprints	Oakland Estuary	Crews that are not racing in San Diego	None	None
Apr. 13/14	Pre- Regionals Tune-up	Lexington Reservoir, Los Gatos	All/Most Teams	None	None
May 3-5	Southwest Youth Championships	Lake Natoma, Rancho Cordova	All Teams	Bus/Van	None
May 19	Annual Team Banquet	Crowne Plaza, Palo Alto	All Teams	None	Free for athletes, ~\$30 ea
June 1-2	U15/U17 National Championships	Cooper River, Camden, NJ	Men's U17 8 Women's U17 8	Air/Bus/Van	Yes (~\$1,400)
June 6-9	Youth National Championships	Benderson Park, Sarasota, FL	All that qualify	Air/Bus/Van	Yes (~\$2,000)

Coaching Staff

Name	Coaching Position	Email Address
ADMINISTRATION		
Sheila Tolle	Interim Executive Director	director@norcalcrew.org
Justin Perry	Maintenance & Transportation	Justin@norcalcrew.org
MEN'S PROGRAM		
Jarrod McClendon	Men's Head Coach	jarrod@norcalcrew.org
Amanda Hawkins	Assistant Varsity Men Coach	amanda@norcalcrew.org
Tom Taylor	Assistant Varsity Men Coach	tom@norcalcrew.org
Chuck Bonnici	Novice Men's Head Coach	chuck@norcalcrew.org
Kathleen Faust	Assistant Novice Men Coach	kathleen@norcalcrew.org
WOMEN'S PROGRAM		
Stefan Evano	Women's Head Coach	stefan@norcalcrew.org
Chris Del Zompo	Assistant Varsity Women Coach	chrisdz@norcalcrew.org
Naomi Schulze	Assistant Varsity Women Coach	naomi@norcalcrew.org
Brittney O'Brien	Assistant Novice Women Coach	brittney@norcalcrew.org
8th GRADE DEVELOPMENT PROGRAM		
Chris Flynn	8 th Grade Program Head Coach	chris@norcalcrew.org
Steve Hope	8 th Grade Program Assistant Coach	steve@norcalcrew.org
RECREATIONAL PROGRAM		
Chris Del Zompo	Recreational Head Coach	chrisdz@norcalcrew.org
Naomi Schulze	Recreational Assistant Coach	naomi@norcalcrew.org

Parent Volunteer Committee Chairpersons

Role	Name	Email Address
Parent Leaders		
Parent Committee Chair/Regatta Captain	Lori Brockman - Lead Jennifer Santoro	lori.a.brockman@gmail.com Jennifer.santoro@ssimda.com
Parent Committee Chair/Communications Captain	Rachel Berg - Lead Laura Woodside	rachel.b.berg26@gmail.com laura.woodside@gmail.com
Inventory Planning and Management Captain	Michelle Donatello Janet Medlin	Janet.=medlin@comcast.net
Food Captain	Susan Lier	lierfamily@mac.com
Committee Chairpersons		
Supply Trailer "The Harley" Towing	John Bauer Andy Hewett	37baltic@gmail.com andyhewett441@gmail.com
Marketing & PR		
Novice Parent Social	Pete Mulligan	Petemulligan1@gmail.com
Parent Table	Athena Bradley Meredith Walsey Kay Dahlgren	athena_bradley@yahoo.com mjwalsey@gmail.com wagamommy@hotmail.com
Photographers	Bob Murphy – Lead Jack Dahlgren Robert Tompkinson Daniel Ljunggren	Murphy@pjtpartners.com jack.dahlgren@gmail.com rtomkinson@yahoo.com daniel.ljunggren1@gmail.com
Season Social Planning	Sarah Lammerson Jessica Hope	slammersen@msn.com jessicaehope@gmail.com
Social Media	Farima Fakoor Marianne Jett	ffakoor@ggu.edu marianne.jett1@gmail.com
Spring Banquet	Patricia Anderson – Lead Sarah Lammerson Vesna Ljunggren Nitin Mangtani	panderson1355@gmail.com slammersen@msn.com vesna.ljunggren@gmail.com nitin@predictspring.com
Sprint Banquet- Awards		
Varsity Parent Social	Maria Frantz	maria@frantzfamily.com
Website	Kate Wormington	kate@mac.com
Yearbook	Pete Mulligan	petemulligan1@gmail.com

Board of Directors

Name	Role	Email Address
A-Level Directors:		
Marc Prioleau	Chairperson	mprioleau@gmail.com
Michael Strambi	Treasurer	michael.strambi@gmail.com
Sheila Tolle	Secretary	sheila.tolle@gmail.com
Eric Warner	Parent Liaison	ericlw@jll.com
B-Level Directors (current parents)		
Rachel Berg	Parent's Group Leader	rachel.b.berg26@gmail.com
Lori Brockman	Parent's Group Leader	lori.a.brockman@gmail.com
April Steuber Carlson	At Large	april@carlsonhome.com
Bart Lammersen	At Large	bart.lammersen@am.jll.com

Understanding the Sport of Rowing

Rowing Boats

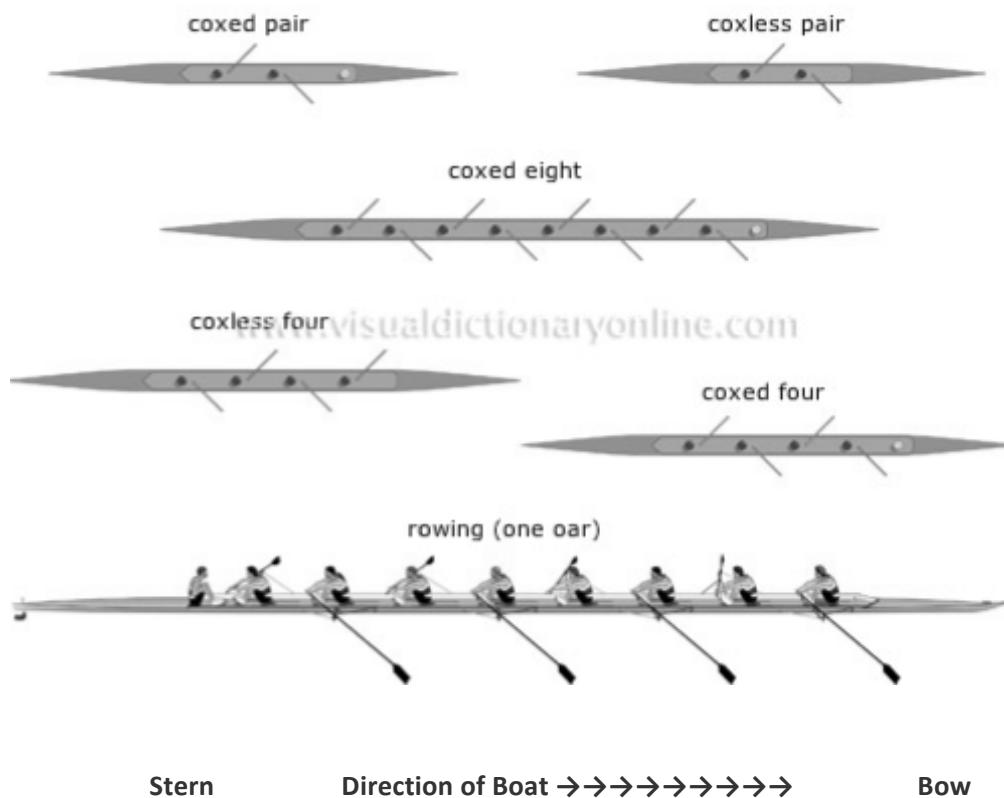
There are sculling and sweep boats in rowing.

Sculls: Scullers use a pair of oars or sculls (ie two oars per athlete). Sculling events are marked with an "x". A single rower with a pair of oars is a 1x, the double is a 2x, and the quad is a 4x.

Sweep: Athletes with only one oar are sweep rowers. Sweep boats are pairs (2), fours (4) and eights (8). Sweep boats may or may not carry a coxswain with the exception of an 8, which always has a coxswain (8+). A sweep boat will be marked with a "+" indicating a coxswain (ie 2+, 4+). A sweep pair or four without a coxswain is marked with a "-" (as in 2- or 4-).

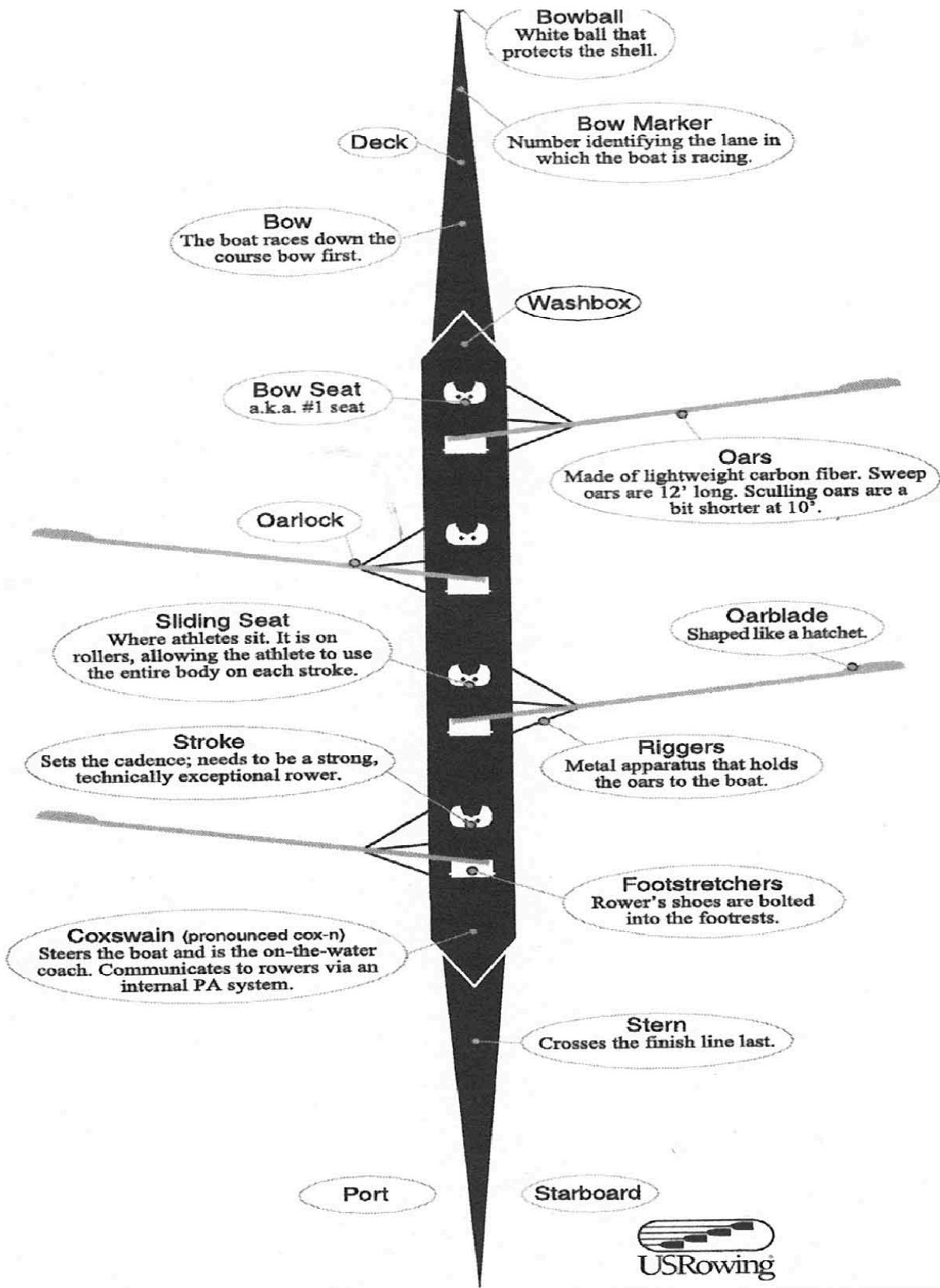
Shell: A "Shell" can be used interchangeably with boat.

Straight: A "Straight" refers to a shell without a coxswain e.g. a straight four or straight pair.



Seat Number from Stern to Bow:

Coxswain Stroke=8 Seat 7 Seat 6 Seat 5 Seat 4 Seat 3 Seat 2 Seat Bow=1 Seat



Seating in a Rowing Boat

- Bow:** The "Bow" is the first part of the boat that crosses the finish line. While it is the forward section of the boat, the rowers have their backs turned to it.
- Stern:** The "Stern" is the rear side of the boat, it is the direction the rowers are facing.
- Bow Seat:** The person in the seat closest to the bow and crosses the finish line first. The "Bow" Seat is also known as #1 position.
- Boat Positions:** These are also called seats. In an eight, from the stern, you have stroke, 7-seat, 6-seat, and so on up to the bow seat. In a four the stroke is the four seat, followed by 3-seat, and so on.
- Coxswain:** The Coxswain's responsibilities include steering, strategy, and motivating the rowers. Traditionally, coxswains are thrown in the water after a winning race. The term "Coxswain" is a noun and to "Cox" is a verb.
- Stroke:** The rower who sits closest to the stern. The "Stroke" Seat sets the rhythm of the boat. The rowers behind him/her must follow his/her cadence or rhythm.
- Bow Coxed Boat / Bow Loader:**
This is when a coxswain is near the bow instead of the stern. It is harder to see the coxswain in this type of boat, because only the head is visible. Having the coxswain virtually lying down in the bow reduces wind resistance and the weight distribution is enhanced, e.g. a Bow Coxed 4.
- Port:** The left side of the boat is called "port", while facing forward, in the direction of movement. Rowers on the port side of the boat are usually (from the stern) stroke, #6, #4 and #2.
- Starboard:** The right side of the boat is called "starboard", while facing forward, in the direction of movement. With standard rig 8, with a port stroke, rowers on the starboard side of the boat are Bow, #3, #5 and #7.
- Run:** The "Run" is the distance the shell moves during one stroke. You can figure the run by measuring the distance between the puddles (swirling eddies) made by the same oar.
- Set:** The "Set" is the balance of the boat. A good crew rows without touching the water on the recovery, keeping their bodies and hand heights controlled, balancing the boat with minute movements of their hands, and the oars, up and down. All rowers in a boat set the boat. If the boat is down to port, portside should raise their hands and starboard should lower theirs. If the boat is down to starboard, port should lower their hands and starboard raise theirs.
- Swing:** A near-perfect synchronization of motion in the shell, enhancing performance & speed. After rowers learn to set the boat, they must learn to catch together, to apply their power correctly and in a uniform manner, and to finish cleanly and together.

Internal Set-up of a Rowing Boat

- Cox box:** The PA system used by Coxswain in the boat. You know you are a rower when you don't giggle when handling one.
- Bucket, German, or tandem rigging:** An alternative boat configuration where two consecutive rowers row on the same side of the boat (in a sweep boat) instead of alternating from side to side all the way down.
- Gate:** The bar across the oarlock that keeps the oar in place.
- Oar:** A rower moves the boat with one (in sweep) or two oars (in sculling). The oar is made up of a shaft and blade. A collar on the shaft keeps the length of oar inside the oarlock constant. Modern oars have designated smooth sections for placing the hands. The color and design on the blade identify the rowing club. Oakland Strokes blades are orange and white with a green stripe.
- Oarlock:** The oarlock sits on the rigger and holds the oar. It swivels during the rowing motion.
- Rigging:** The moveable hardware of the shell, particularly the riggers, are referred to as the rigging. Adjusting and altering accessories in a shell, such as the riggers, foot stretchers, tracks, sliding seats etc is referred to as rigging.
- Rigger:** The triangular or wing shaped, metal or carbon fiber structure bolted onto the side of the shell, or across it, and holds the oarlock.
- Track:** The set of runners mounted in the shell for the wheels of each seat in the boat.
- Stretcher or Foot-Stretcher:**
Where the rower's feet go. The stretcher consists of two inclined footrests that hold the rower's shoes. The rower's shoes are bolted into the footrests. The foot stretcher position (and, with a bit more trouble, the position of the slide) are adjustable, to suit the height of the rower.

The Action of Rowing

- Catch:** The part of the stroke during which the blade enters the water. At the opposite end of the stroke from the catch is the 'release', when the blade comes out of the water.
- Check:** If a crew rushes up the slide into the catch, the boat can be seen to visibly dip in the water and slow down significantly. This is called check and is caused by the momentum of the rower's bodies reversing direction. For good run of the boat, check should be minimized.
- Crab:** A crab occurs when the oar is not properly set in the oarlock at the catch and slices into the water. As the boat moves past the oar, the rower cannot get the oar blade out of the water and the result is that the oar goes parallel to the boat. If the rower fails to lie back and get out of the way he/she can be thrown out of the boat by the oar handle sweeping through the boat. The oar and oarlock are shaped so that the oar sits correctly during recovery and drive, without undue pressure from the rower. Crabs typically happen to inexperienced rowers gripping the oar too tightly. If the rower maintains a loose grip on the oar during the catch and drive, the oar will sit correctly in the water.

Drive:	While the catch and release are the turning points in and out of the water, the drive and the recovery are the two main parts of the rowing stroke. After the oar catches the water, the rower drives the oar(s) through the water by pushing with the legs, followed by the swinging the back to the bow and finally pulling with the shoulders and arms. After the oar is released from the water, the ‘recovery’ starts. The whole stroke is catch, drive, release, recovery.
Feathering:	Action of turning the oar blade parallel to the surface of the water during the recovery. Under normal circumstances, the blade is always feathered during the recovery. Feathering cuts down the wind resistance of the blades and makes it easier to balance the boat without touching the water. During the drive, the blade is always ‘on the square’ being perpendicular to the water. Sometimes crews will practice rowing with square blades on the recovery, to improve their catch, finish, and balance.
Finish:	As part of the stroke cycle, the finish is the last part of the drive when the oar is released from the water with a downward motion of the hands, starting the recovery. A ‘clean finish’ means that water is not thrown by the blade as it is feathered. This is accomplished by extracting the blade on the ‘square’ before feathering.
Leg power:	Power applied by the legs pushing against the foot stretcher, levering the boat through the oarlock, past the anchor point of the oar in the water. The legs are the part of the body that can put out the most power and the leg drive is the most important part of the rowing stroke.
Stroke length:	The length of the stroke in the water. All other things being equal between two boats, the boat with greater stroke length will go faster.
Miss water:	A defect in the catch when the oar blade fails to drop immediately into the water at the maximum outreach, missing air before anchoring in the water.
Recovery:	The recovery is the other main part of the rowing stroke after the drive and release when the rower moves towards the stern of the boat, preparing for the next catch and drive. The order of the recovery is the opposite of the drive: first the hands move away, then the trunk of the body swings forward, and then, after the hands come over the knees, the rower bends the legs and pulls up the slide. A properly controlled recovery is an important factor in the run of a boat.
Run:	A measure of how far a boat moves during each stroke. Mainly, this can be judged by looking at the position of the 2-seat’s puddle in the water when the boat takes the next stroke. With good run, at a low stroke rating, the puddle will clear the stern of the boat. At higher stroke ratings, it becomes more difficult to maintain good run.
The slide:	The part of rowing motion when a rower moves the seat. A rower is ‘rushing the slide’ when they move the seat too rapidly during recovery, out of proper proportion to the boat speed and the other parts of the recovery. Rushing the slide forces the rower to come to a hard stop at the catch, slowing down the boat. A rower is “shooting the slide” when they apply their leg power and the seat moves, but the oar doesn’t move with the seat. Shooting the slide wastes energy and makes a proper rowing stroke impossible.

- Stroke rating:** The number of strokes taken per minute. High level international crews start at 48 strokes per minute and race the main part of a 2000 m race at 38 strokes per minute. High level junior crews in peak form race at slightly lower ratings. Longer head races are typically at lower ratings of 30-34. A typical rating for steady-state rowing during practice is 22 strokes per minute.
- Skying:** When the blade is too high above the water during recovery, particularly when approaching the catch, caused by a rower dipping the hands.
- Washing out:** When an oar blade comes out of the water during a drive, creating surface wash and losing power.

About Rowers

- Ergometer:** Commonly known as an “erg”, it’s a rowing machine that closely approximates the actual rowing motion. Erg scores from 2K tests (or other distances) are used by coaches to assess a rower’s aerobic and endurance capabilities. The rowers use the Concept II, which utilizes a flywheel and a digital readout so that the rower can measure his “strokes per minute”, the distance covered and power output. While power output can be read in Watts, it is typically measured as a 500 m split. Rowers say they went “1:42” for 2000 m. This means their time for 2000 m was 4 x 102 seconds or 6:52. Rowers may say they “improved a full split.” This means they went one second faster per 500 m for whatever length piece they rowed. If they rowed 2 k, they rowed 4 sec faster.
- Erg Piece:** The set distance done on the erg for determining an erg score. Typical erg pieces are 2K, 5K, 6K and 10K meters.
- Erg Test:** This is a test to measure a rower’s maximum energy output on a rowing machine over a specified distance or time interval. Since rowing speed is largely determined by power output, this is an important measure of rowing ability. A good erg score, however, does not in itself indicate ability to effectively move a boat. Therefore, coaches also use seat racing, observation of rowing technique, and other selection criteria to select rowers for boats.
- Split:** The standard measurement of speed, being the time in minutes and seconds required to travel 500 meters. So a split of 2:00 is a speed of 2 minutes per 500 meters or 4.17 meters per second. A world championship or Olympic rowing course is typically divided into four 500 m long sections.
- In 2:** A coxswain command meaning, “in two strokes.”
- Power 10:** A coxswain call for rowers to do 10 of their best, most powerful strokes during a race or practice piece. It is typically an attempt to move ahead of another boat.
- Junior:** A Junior is a competitor who in the current calendar year does not attain the age of 19, or who is and has been continuously enrolled in secondary school as a full time student seeking a diploma. A competitor thus ceases to be a Junior after December 31 of the year of his or her 18th birthday, or of the year in which he or she completes the 12th grade of secondary school, having been a full time student, whichever is later.

Junior Open weight (Heavyweight) / Lightweight:

Refers to a rower and not a boat. When a male rower is 150 lbs or under, he may qualify for a lightweight entry. When a female rower is 130 lbs or under she may qualify as a lightweight. Otherwise a rower is considered to be an open weight or heavyweight.

Open weight races make no distinction for the weight of the rowers. The benefit of weight classes is that weight affects not only the amount of height and muscle that an athlete has, but also how much mass an athlete has to adversely affect the acceleration of the boat.

Lightweight crews tend to be slower than open weight crews, though only marginally. Lightweight rowing is popular at the junior level because many of the athletes have not finished growing yet. Coxswains have their own weight limitations and do not affect the weight classification of a crew.

About Races/Regattas

Uniform (Uni): The team spandex uniform worn at regattas and often for practice.

International Distance:

The standard international rowing race distance of 2000 m, commonly known as a 2K.

Beginning a Race:

At the start of a race, all boats are aligned in lanes, with the stern of each boat even with the others and squarely facing the course. Each boat is allowed only one false start; two means a disqualification.

Racing Start: Refers to the first strokes of the race, usually shorter and quicker than those used during the body of the race.

Head Race: A timed race in which the boats have a staggered start, and a total distance covered generally around 4500m. Typically held in the fall season.

Sprint Race: A timed race where the boats start at the same time in parallel lanes, generally 2000m in distance. Typically held during the spring season.