



# Green Lake Crew Handbook



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## **Introduction**

The Green Lake program is demanding and richly rewarding, but also confusing to those new to the sport. This handbook will help you and your rower through the first year.

Green Lake Crew has a long and proud history of excellence that began in 1948 and has evolved into a nationally recognized competitive rowing powerhouse. Green Lake is consistently competitive at the NW Regional Championship Regatta and is often represented at the USRowing Junior Invitational regatta finals. Many Green Lake rowers go on to row in college and several have competed at National and Olympic levels. Don't be scared away by this high level of achievement. Anyone is welcome, everyone is encouraged, and all will row at Green Lake. The more you know about the program, the more enthusiastic you will become.

Green Lake Crew is a sponsored program of the Seattle Parks and Recreation Department. The City provides the facilities and pays the office staff and a few of the junior coaches. The Rowing Advisory Council (RAC) provides boats, equipment, supplies, and most coaching salaries. The RAC is a group of volunteers (parents and adult rowers) who are dedicated to Green Lake Crew's continued success. Green Lake junior rowers come from all over the greater Seattle area and range in age from 13 to 18. All abilities and levels of experience have an opportunity to learn to row and compete.

The philosophy of Green Lake Crew is simple: "pull hard, go fast, have fun."



*Green Lake's Men's 8+ won Silver at the USRowing Youth National Invitational Championships in Cincinnati, Ohio, June 2007*

## Basics of Rowing excerpted from US Rowing, USRowing.org

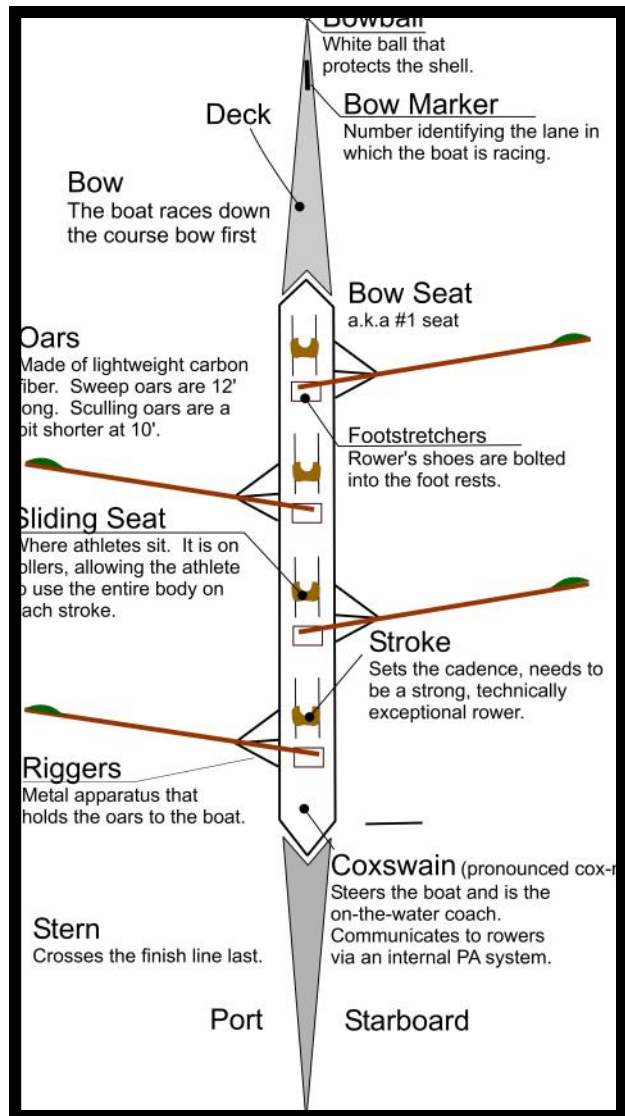
**Rowing** is a total body workout. Rowing only looks like an upper body sport. Although upper body strength is important, the strength of the rowing stroke comes from the legs. Rowing is one of the few athletic activities that involves all of the body's major muscle groups. It is a great aerobic workout, in the same vein as cross-country skiing, and is a low-impact sport on the joints.

Rowers are probably the world's best athletes. Rowing looks graceful, elegant, and sometimes effortless when it is done well. Don't be fooled. The sport demands endurance, strength, balance, mental discipline, and an ability to continue on when your body is demanding that you stop.

### **Sweep** (like a broom) and **Sculling**:

There are two basic types of rowing, sweep rowing and sculling. In sweep rowing, athletes hold one oar with both hands. In sculling, the athletes have two oars, one in each hand.

**Boat configurations:** Sweep rowers come in pairs (2s), fours (4s), and eights (8s). Scullers row in singles (1x), doubles (2x), and quads (4x). Sweep rowers may or may not carry a **coxswain (cox-n)**, the person who steers the boat and serves as the on-the-water coach. All eights have coxswains, but pairs and fours may or may not. In all sculling boats and sweep boats without coxswains, a rower steers the boat by using a rudder moved with the foot.

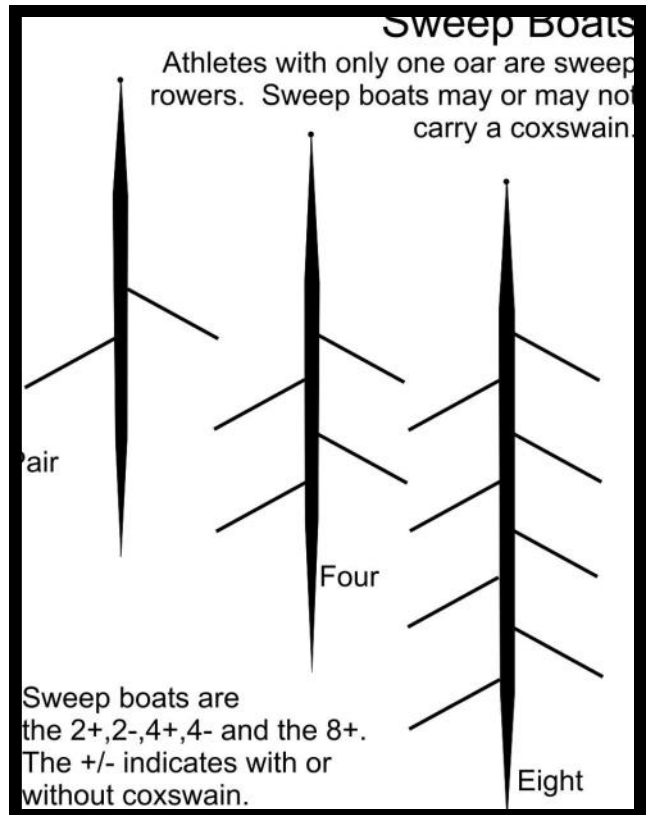


**Categories:** Rowers are categorized by sex, age, and weight. Events are offered for men and women, as well as for mixed crews containing an equal number of men and women. There are junior events for rowers 18 or under or who spent the previous year in high school, and there are masters' events for rowers 27 and older. There are two weight categories: lightweight and open weight.

**Equipment:** Today's rowing boats are called shells, and they're made of lightweight carbon fiber. The smallest boat on the water is the single scull, which is only 27-30 feet long, a foot wide, and approximately 30 pounds. Eights are the largest boats at 60 feet and a little over 200 pounds. Rowers use oars to propel their shells. Sweep oars are longer than sculling oars, typically with carbon fiber handles and rubber grips (although some sweepers still prefer wooden handles). Sculling oars are almost never wood.

**The Crew:** Athletes are identified by their position in the boat. The athlete sitting in the bow, the part of the boat that crosses the finish line first, is the bow seat or No. 1 seat. The person in front of the bow is No. 2, then No. 3 and so on. The rower closest to the stern that crosses the finish line last is known as the stroke. The stroke of the boat must be a strong rower with excellent technique, as the stroke is the person who sets the rhythm of the boat for the rest of the rowers.

**Teamwork** is number one. Rowing isn't a great sport for athletes looking for MVP status. It is, however, teamwork's best teacher. The athlete trying to stand out in an eight will only make the boat slower. The crew made up of individuals willing to sacrifice their personal goals for the team will be on the medal stand together. Winning teammates successfully match their desire, talent, and blade work with one another.



**Measuring Speed:** Rowers speak in terms of strokes per minute (SPM), literally the number of strokes the boat completes in a minute's time. The stroke rate at the start is high and then "settles" to a race cadence typically in the 30s. Crews sprint to the finish, taking the rate up once again. Crews may call for a "Power 10" during the race – a demand for the crew's most intense 10 strokes.

**Race watching:** The crew that's making it look easy is most likely the one doing the best job. When watching a race, look for a continuous, fluid motion from the rowers; synchronization in the boat; clean catches, i.e. oars entering the water with little splash; and the boat with the most consistent speed. Lanes usually are numbered from left to right and from one to six when facing the starting line. Binoculars help the viewer identify distant boats, a collapsible chair helps make a long day more comfortable, and this booklet will help a first time observer understand what is going on.

There are numerous categories for races, as well as distances. At Green Lake the races are 1000 meters, at Brentwood in Canada, the races are 1500 meters, but most other races in the spring are 2000 meters. Varsity boys and girls times for 1000 m races are in the neighborhood of 3 minutes for varsity boys and about 3:20 minutes for varsity girls. For 2000 meters, varsity boys times are about 6 minutes, varsity girls times are about 7 minutes. Times vary depending on conditions, such as the weather and wind direction.

## **Rowing at Green Lake**

Rowers at GLC compete at different levels depending on ability, experience, and commitment. There are five different levels of rowers:

- "Novice" – first year rowers are considered novices through their first spring season.
- "3V" and "4V" – rowers who have completed one spring season of rowing and are in the "third from varsity" or "fourth from varsity" boats.
- "JV" – the rowers who are one step from the varsity boat.
- "Lightweight varsity" - the fastest lightweight rowers. Rowers in this boat are eligible for varsity letters in the spring. There is also a lightweight category at the Youth Invitational's each year.
- "Varsity" – the fastest and most capable rowers.

Occasionally, there are changes in assignments during the season based on the results of seat racing, "erg" times, and coaches' assessments of performance.

Spring Weight Categories:

Light weight women must weigh 130 pounds or less.

Light weight men must weigh 150 pounds or less.

Open weight rowers have no weight restrictions.

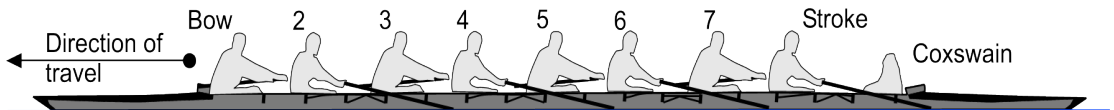
# Ergometers

Ergometers are used to measure the strength of athletes. They are machines that simulate the rowing process and allow the coaches to assess athlete capability. Generally, the athlete is asked to “row” either 2000 meters in the spring season, or 6000 (boys) or 5000 (girls) meters in the fall season. The time taken to row those distances is then used to evaluate the athletes against each other.

Lower times are an indication of the power the athlete can contribute to boat speed. There are other factors, such as technique, that determine the athlete’s ability to contribute to boat speed. Erg times are but a single factor in the determination. In addition, for the best athletes, these times are submitted to the coach of the Junior National Team for consideration for possible selection to represent the United States at the Junior World Championships in the summer.

Generally, for male rowers, 2000 meter erg scores range from 6 minutes 10 seconds to 6 minutes 40 seconds for varsity-caliber athletes. Female varsity athlete 2000 meter times range from 7 minutes 10 seconds to 7 minutes 50 seconds.

For 6000 meter pieces, the range is from 20 to 22 minutes for male varsity open weight caliber athletes. Green Lake Varsity Open weight Girls use a 5000 meter piece with times ranging from 19 to 21



Seat assignments in an eight.

## **Racing Seasons**

**Fall:** Fall season is the long distance training season for crews. Most fall races consist of long distance (between 2.5 and 4 miles) head races, and results are calculated by time, not head-to-head competition. The starts are staggered allowing many crews to compete simultaneously. The one short race of the fall is the Frostbite Regatta hosted by Green Lake.

**Winter:** From November through January, crew practice consists of land workouts: rowing on the ergometer (the indoor rowing machine which calculates a rower's power output), weight training, and cardiovascular exercises such as running stairs. Rowers should continue conditioning to be in shape for spring.

**Spring:** Spring (February-May) is the most competitive season for rowing. Races are straight and short, 1500 to 2000 meters, and boats race in lanes. In order to accommodate all the competitors, heats are often necessary. Spring culminates with the NW Regional Championships, usually held in Vancouver, Washington. Winning varsity boats are invited to attend the USRowing Junior Invitational (National championship) held in early June in Cincinnati, Ohio.

**Summer:** Summer season at Green Lake (late June-early August) is not only the shortest, least competitive season, but also a great time to start rowing and learn the basics. Summer ends with the Green Lake Summer Extravaganza, a perfect time for a rower's first competitive race.

***See the back cover for a current calendar of events.***

## **Helping Your Rower**

Understanding the requirements of this sport from a parent's perspective will help support your athlete. Rowing requires a tremendous commitment from each parent to help each rower succeed.

**Transportation:** Unless your teen is able to drive, you will need to arrange transportation to and from Green Lake. At the beginning of the fall and spring seasons, the office prepares a roster of rower's names, addresses, and phone numbers that is useful for carpool arrangements. Ask your rower to pick one up. Since practices are every weekday and time on the water is limited, make every effort to get your rower to crew on time. Note: half of each practice involves a land-based workout, and half is on the water. Typically, the boys are working out on land while the girls are on the water, and vice versa.





*Green Lake Women's Varsity Eight top ten finish at the Youth National Championships, Cincinnati, OH, June 2007*

**Absences:** The coaches expect every rower to participate every day. If an absence is unavoidable, he or she must call the office by 3:00 p.m. and tell his or her coach that they will be absent. However, multiple absences will hurt the athlete's chances for advancement.

**Vacations:** Rowing continues through midwinter break (in February) and spring breaks (in March/April). Your rower's success in crew depends to a significant extent on attendance. Please keep this in mind when making vacation plans. Coaches will encourage your family to avoid taking vacations during these school break times.

**Clothing:** The best clothing for rowing and land workouts is soft, stretchy, and fairly form fitting. Polypro, CoolMax, and similar fabrics are best because they keep the rower relatively warm even when wet and they dry quickly. Loose clothing can get caught in the slides, so avoid basketball style shorts or warm-ups. Running shoes and socks are needed every day for land workouts. Good running shoes are essential and should be replaced after every 300 or 400 miles of use. Super Jock and Jill (on the north side of the lake) offers a 10% discount to Green Lake rowers.

In addition, the boathouse office sells Green Lake Crew rowing clothing. For regattas, your rower will need a racing tank top, which can be purchased in the boathouse office. Occasionally, unisuits, sweat suits, or t-shirts are ordered by specific boats or by the junior rowing captains for team members.

The following on-line sites may be helpful to you for purchasing practice clothing for your rower: [www.jlracing.com](http://www.jlracing.com), [www.regattasport.com](http://www.regattasport.com), and [www.sewsparty.com](http://www.sewsparty.com).

## **Nutrition**

Rowing is a very demanding sport, and the athletes will be burning a lot of calories over the course of a workout. You should be encouraging your athlete to carry a water bottle and drink lots of water during the day as well as to eat a good lunch. Many teens don't always eat as well as they should at school.

At dinner time, make sure that dinners include protein, fat, and carbohydrates. The energy systems that the athletes use require that they have water and carbs to generate the energy they need during a workout. Low carbohydrate diets are not recommended, and fat intake (within reasonable limits) should only be an issue for lightweight athletes who are trying to make weight goals.

## **Volunteer Opportunities**

Much of Green Lake Crew's success can be credited to the many volunteers willing to step forward and do what needs to be done. Whether it is working on race day, chaperoning at regattas, or procuring auction items, helping out at Green Lake is essential to the organization and rewarding for the volunteer. It is one of the best ways to quickly understand the unique culture of crew, meet other parents, chat with the coaches, and get a grip on the rowing vocabulary. Check out some of the ways you can get involved.

We urge all parents to join our Yahoo email group to find out about volunteering opportunities by sending email to:

**[greenlakecrew-subscribe@yahoogroups.com](mailto:greenlakecrew-subscribe@yahoogroups.com)**

## **Regattas**

Green Lake hosts three regattas a year: Frostbite (November), Spring (March), and the Summer Extravaganza (August). Hosting regattas requires many volunteers: set-up people, launch drivers, dock masters, finish line workers, food booth helpers, t-shirt sales people, and more.

When the crew travels to regattas outside the Seattle area, chaperons are needed. Chaperons travel on the bus or plane with the team, sleep where the team sleeps (often on a gym floor), and help out wherever needed. The Junior Boosters provide food for the team at many regattas. Volunteers set up the food booth, cook, and serve throughout the day, helping to keep the rowers well fed and ready to row.

Our final event of the year is Awards Night, when the rowers are recognized for their hard work and dedication. Volunteers set up, decorate, and serve refreshments.

## **Fundraising**

Green Lake Crew has two scheduled fundraising events during the year.

In the fall there is an Erg-a-thon, a very low-key event which requires a few chaperons and some people to help transport the Ergs.

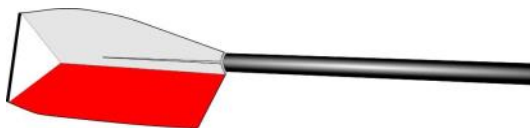
The “Raising of the Green,” Fundraising Dinner is our major fundraising/social event. It is held in March, close to St. Patrick’s Day. This is one of the most important ways Green Lake raises money to provide all the top of the line rowing equipment and scholarships. Volunteers are needed to help with planning, procurement, and on the day of the event. Green Lake Crew encourages everyone to contribute as generously as possible, and attending the event.

## **Rowing Advisory Council**

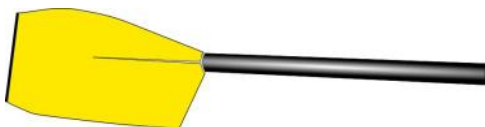
The Rowing Advisory Council (RAC) is the advisory body of Green Lake Crew. This is where decisions are made regarding the budget, equipment purchases, and fundraising. The RAC meets at the boathouse on the third Wednesday of each month. Meetings are open to all. Come see if the RAC is of interest to you.



Ashland High School



Holy Names Academy



Bainbridge Island Rowing



Lakeside High School



Brentwood College School



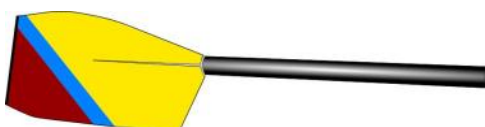
Lake Stevens Rowing



Commencement Bay Rowing



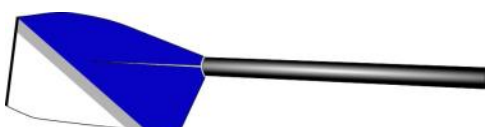
Lake Union Crew



Corvallis Rowing Club



Lake Washington Rowing



Everett Rowing Association



Mt Baker Crew



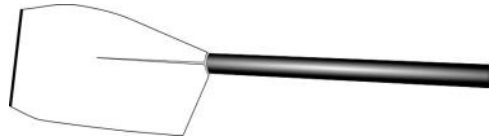
Green Lake Crew



Olympia Area Rowing



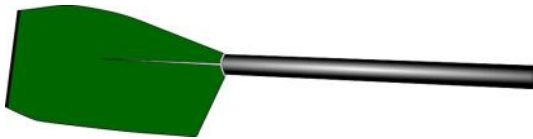
Olympia Area Rowing



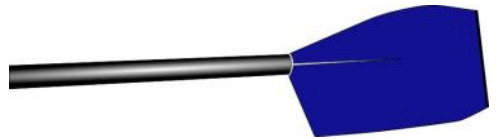
University of Washington



Oregon Rowing Unlimited



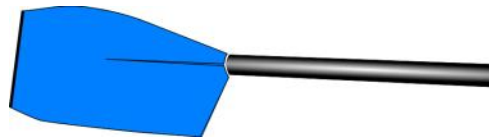
Pocock Rowing Center—Port Blade



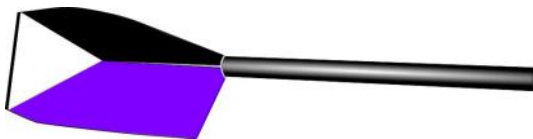
Pocock Rowing Center—Starboard Blade



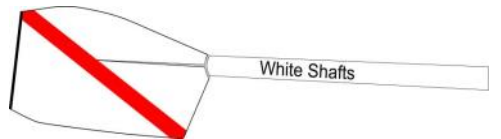
Rose City Rowing



Vashon Crew



South Eugene High School



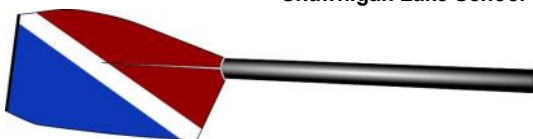
Vancouver Lake Rowing Club



Shawnigan Lake School



Vancouver Rowing Club



Sammamish Rowing Association



Victoria City Rowing Club

## **Getting to Regattas**

Getting your rowers to regattas can be challenging. Your child usually needs to be at the course significantly before the races begin, often very early in the morning. The coach will always specify the arrival time in advance. You provide transportation to local events. Green Lake Crew provides chartered buses for races outside the Seattle area. Note that not all rowers race at all venues. The office staff sends maps and driving directions home with your rower about a week or two before each away regatta. These maps will help you find parking and viewing spots for area regattas.

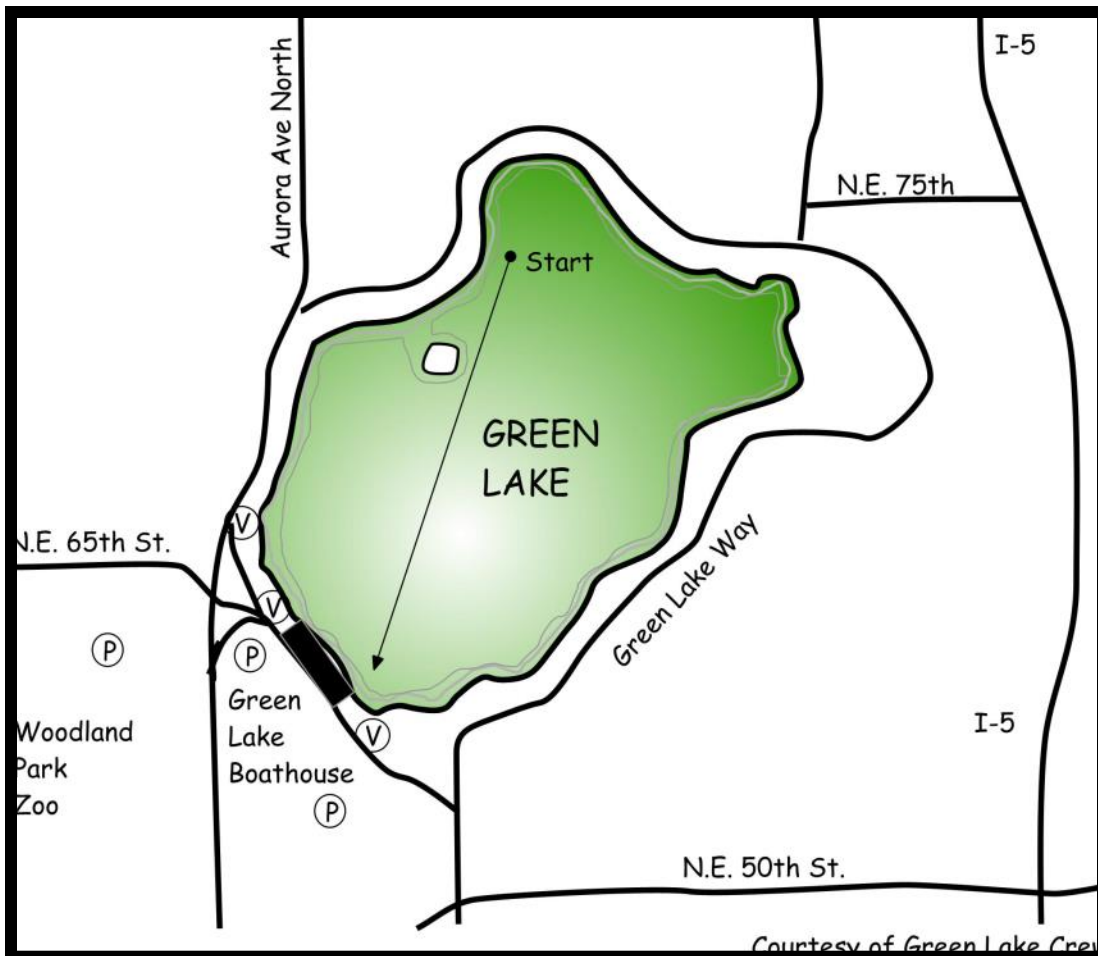


GLC WL4+ at 2007 Youth National Championships in Cincinnati , OH, June 2007



## **BRENTWOOD REGATTA**

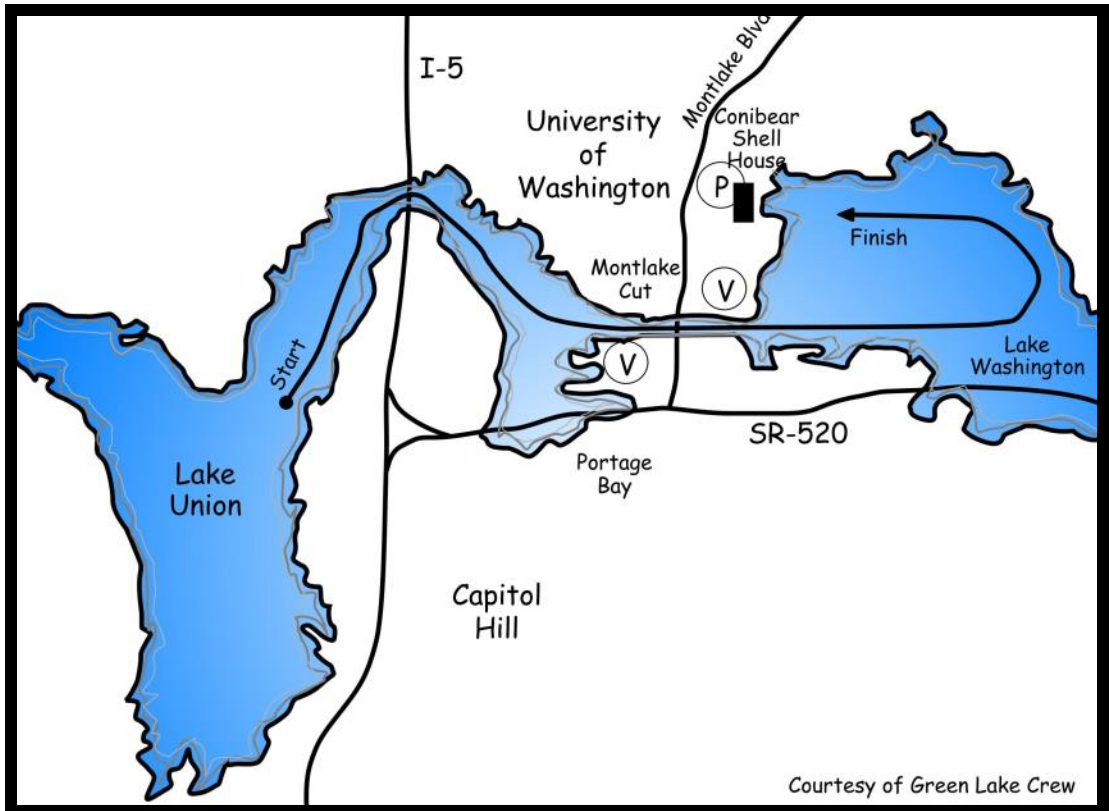
*Brentwood College School hosts this event on its campus in Mill Bay, British Columbia. The 1500 meter race is in the salt water of Sanich Inlet directly in front of the school. All race day activity is centered here, though Green Lake Crew uses the gym floor of a nearby high school for lodging. Accommodations for visiting parents are limited. Check the Brentwood School website at [www.brentwood.bc.ca](http://www.brentwood.bc.ca). Look under BCS regatta for motel listings in the area. Victoria is a bit too far away to make it a good option.*



**GREEN LAKE: SPRING REGATTA, SUMMER EXTRAVAGANZA, FROSTBITE REGATTA**

*Green Lake Crew hosts these 1000 meter races and all activity is centered on the south west shore of Green Lake. Parking is difficult and illegally parked cars are often ticketed. Viewing is excellent all along the southwest shore and from the Aqua Theater.*

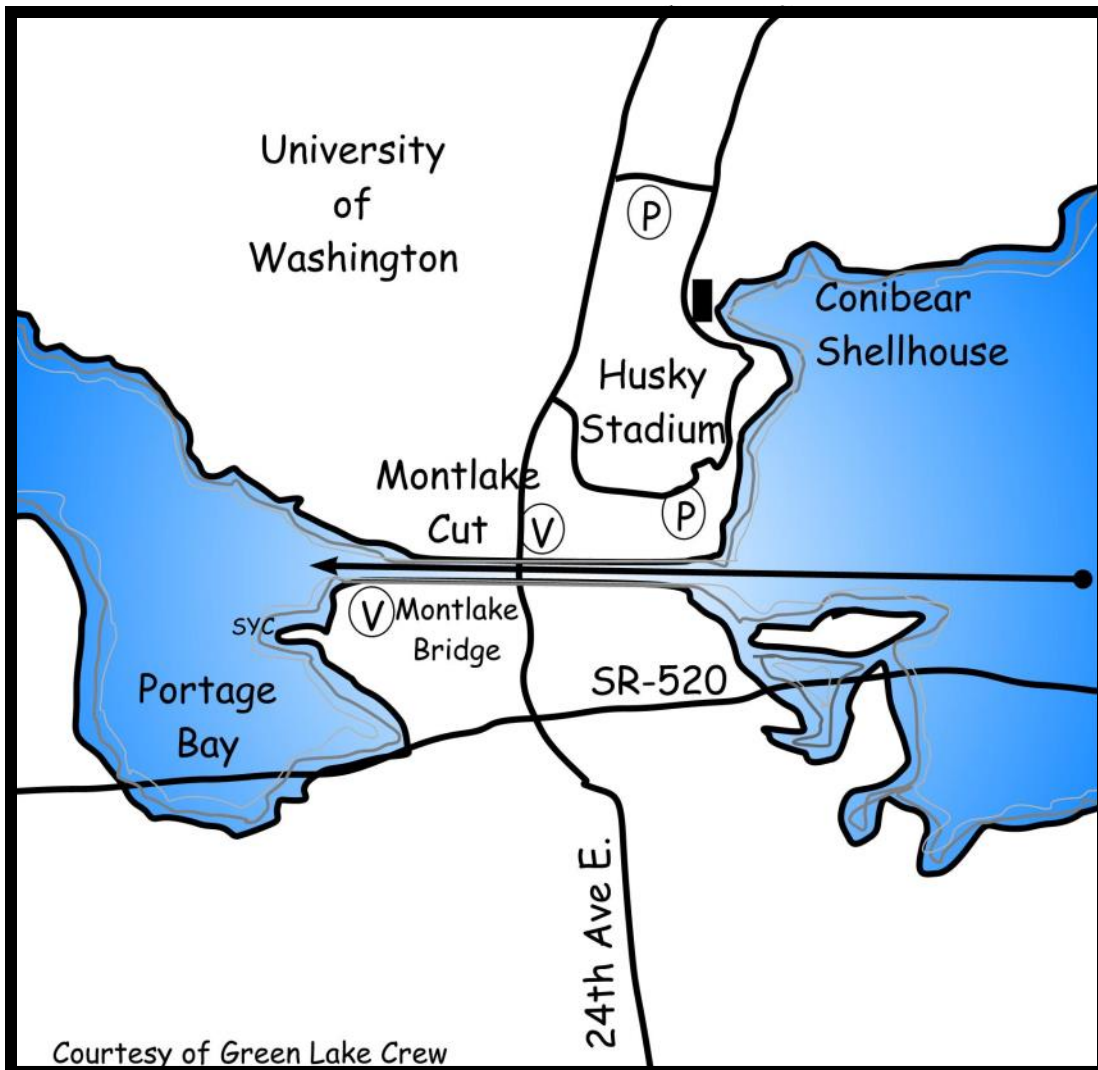




## HEAD OF THE LAKE

*This is a head race beginning in the northeast corner of Lake Union, continuing through Portage Bay and the Montlake Cut into Lake Washington. The finish is in front of the University of Washington's Conibear Shellhouse. The rowers launch at the Conibear Shellhouse. The best parking is at the UW E1 lot just north of the Intramural Activities Building on Montlake Blvd. The best viewing is from the Montlake Bridge or anywhere along the Montlake Cut.*

*Note: This course has changed in recent years. Check with organizers!*



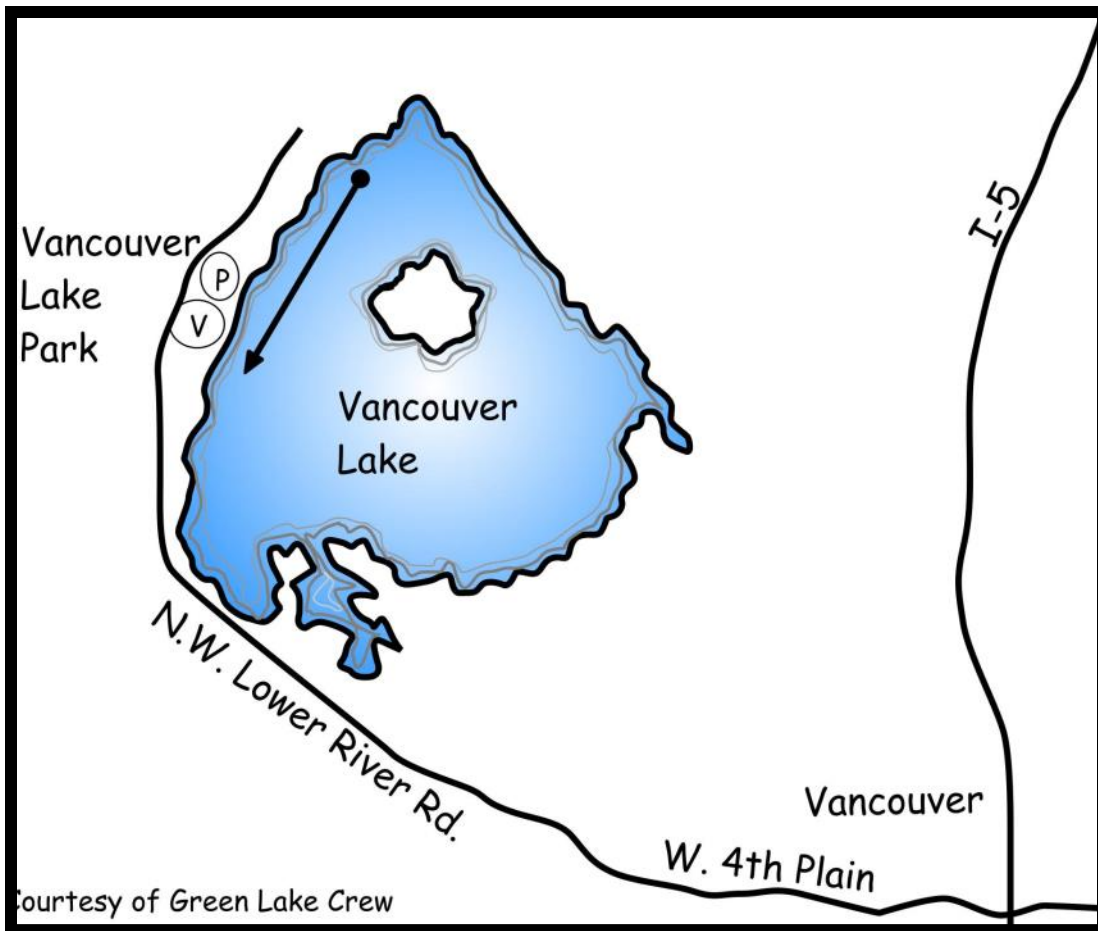
## HUSKY INVITATIONAL and OPENING DAY

*These races have events for juniors, collegiate, masters, and sometimes international Olympic team rowers. The course is 2000 meters starting in Lake Washington and finishing just at the west end of the cut. The best viewing is from the Montlake Cut or Bridge. Launching is at the University of Washington's Conibear shellhouse located just east of the U.W. Intramural Activities Building and tennis courts. Parking is good at U.W. lots E11/E12 or E1.*



### **TAIL OF THE LAKE**

*Tail of the Lake is a head race that begins in the northwest corner of Lake Union and follows the shoreline in a counterclockwise direction, finishing at Gas Works Park. The rowers launch at Lake Washington Rowing Club located just east of the Fremont Bridge. The best viewing and parking is at Gas Works Park and the Fremont Bridge.*

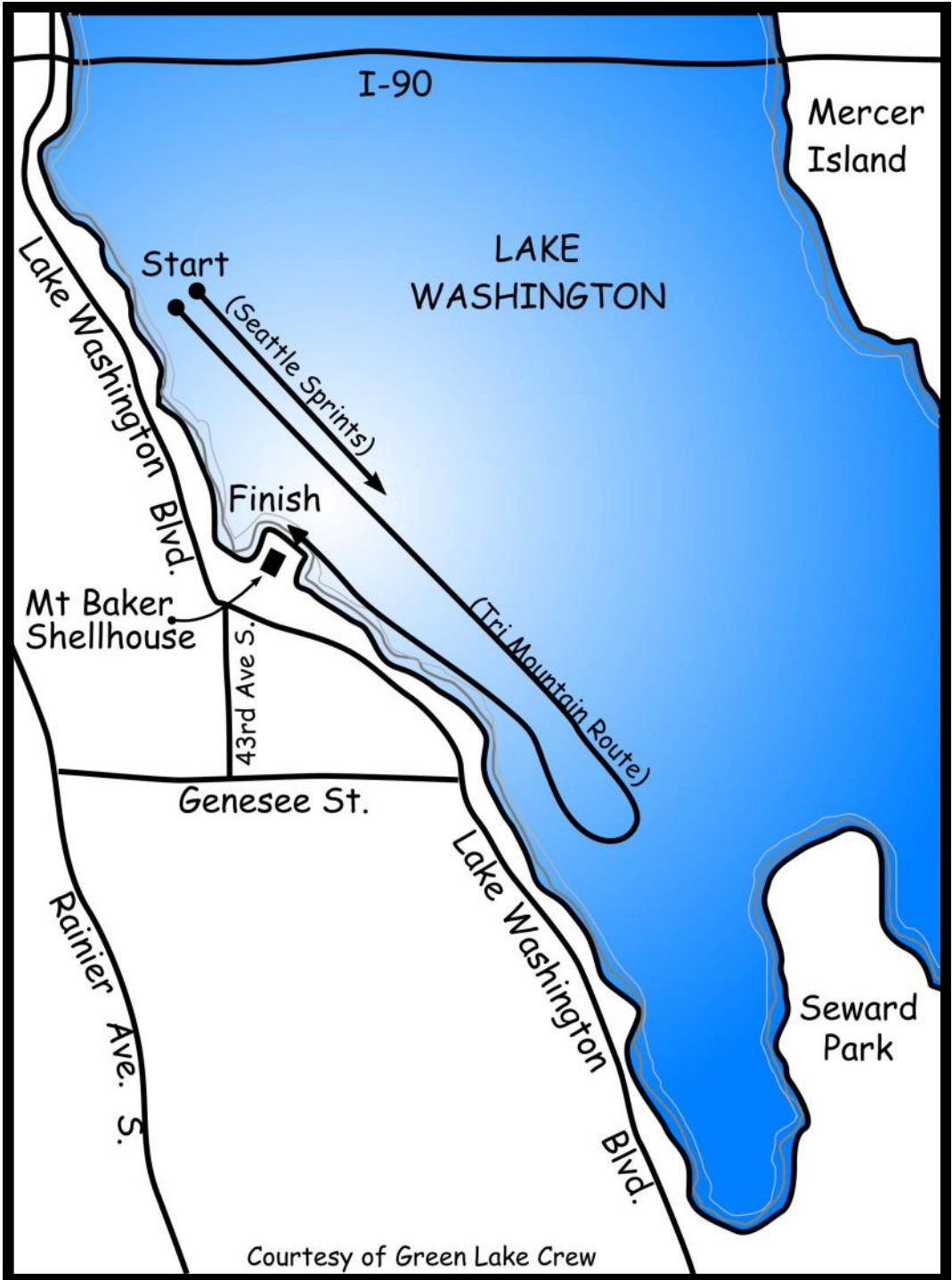


### **NORTHWEST REGIONALS at VANCOUVER LAKE**

*The 2000 meter race course at Vancouver Lake is centered on Vancouver Lake Park. Launching, parking and best viewing are all in the park.*

### **Mount Baker Rowing and Sailing Center**

*Mount Baker Rowing Club at Stan Sayres Park. Parking can be difficult, but the viewing is excellent all along Lake Washington Boulevard. Rowers launch at Mount Baker's boathouse. On a clear day, Mount Rainier, Mount Baker and Mount Olympus (in Olympic National Park) are visible to rowers and spectators from this location.*



Courtesy of Green Lake Crew

# Glossary

- Blade:** The wide part of the oar. Blades are painted in team colors.
- Bow:** The leading end of the shell with a rubber ball on the end to prevent injury.
- Bow Seat:** #1 seat in the boat.
- Catch:** The point at which the blade takes the water to initiate the drive phase of the stroke. The blade must be placed quickly and accurately into the water before the rower changes direction.
- Catching a Crab:** When a rower places the oar into the water without squaring the blade, it often goes too deep and the rower loses control. This can stop a boat dead in the water and also catapult a rower out of the boat.
- Cox (coxswain):** The person in charge of steering the boat and the only person facing the direction of travel.
- Cox Box:** A small amplification system with timer and stroke meter. This allows the cox to be heard all along the boat and provides key elements such as strokes per minute and elapsed time.
- Drive:** The propulsion phase of the stroke, which occurs between the catch and release.
- Ergometer (erg):** The wind resistance machine used to test the absolute power generated by a rower, usually recorded in 500-meter splits. On the water, this force coupled with the distance from catch to release determines an athlete's power value in the boat.
- Feather:** The hand motion used to roll the blade into a horizontal position during the recovery phase of the stroke. The blade can then skim just above the water's surface in preparation for the next stroke.
- Hatchets:** Oars with big blades.
- Head Races:** Fall races between 2.5 and 4 miles, which build rowers' endurance.
- Line-ups:** The order the athletes sit in a boat, partially determined by erg scores.
- Lightweight:** Category for rowers who meet a maximum weight requirement. The weights vary depending on the regatta and season. Weight category applies to the individual, usually 130 for girls and 155 for boys.
- Openweight:** Rowers who are not in the lightweight category.
- Outside Hand:** The hand at the end of the handle (left for ports, right for starboards). This hand dominates the pulling and controls the level of the oar through the stroke.
- Power Ten:** The ten most powerful strokes a crew can produce. Called for by the coxswain. Must be used strategically and not over-used.
- Rate, Stroke rate:** The number of strokes taken per minute.

- Recovery:** The rest phase of the stroke when the blade is out of the water.
- Release:** The point at which the oar is extracted from the water. The end of the work phase of the stroke. When executed properly, it is a smooth, clean maneuver.
- Run:** The boat's response to the send generated by the propulsion phase of the stroke. This is what rowers should feel as the boat glides underneath them on their way up to the catch.
- Rushing:** Athletes who pull themselves up the slide to the catch faster than they drive the oar in the water are "rushing the slide." This slows down a boat.
- Sculling:** Rowing with two oars, each smaller than a sweep oar.
- Seat Racing:** A system by which the coach can judge which rowers are fastest on the water. Two boats of 4 are matched against each other in a series of races. Rowers are switched from boat to boat or seat to seat until an obvious winning combination is achieved.
- Set:** The balance of the boat, achieved by keeping the oars moving together horizontally, preferably along the same plane in both the drive phase and recovery phase of the stroke.
- Slide:** The tracks that the seat moves across or the action of sliding with each stroke.
- Splits:** The time it takes a rower to complete 500 meters based on his/her current pace.
- Stern:** The trailing end of the boat, where fin and rudder are located. Generally the coxswain is seated in the stern so that he/she can see what the rowers are doing. There are, however, "bow loaders" in which the cox is seated in the bow section of the boat.
- The Stroke:** The rower in #8 seat who sets the cadence of the strokes for the other rowers. Must have excellent technique.
- Sweep:** Each athlete has only one oar.