

20 California Solar 20 Regatta

May 1 – 2, 2026

Rancho Seco Recreational Area smud.org/SolarRegatta





The California Solar Regatta (CSR) extends a warm welcome to all teams competing in the 2026 Regatta Races.

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Mission

The SMUD California Solar Regatta (CSR) teaches students about solar electricity. The program promotes renewable energy through solar technology and innovation by using an engaging way to connect design and engineering. The CSR invites teams from California to compete and showcase their boat design and innovative engineering through a variety of races and presentations.

We'll provide the following:

- Recorded training for high school and postsecondary teams
- (2) 235-watt solar modules
- Meals at the competition
- Orientation
- Camping facilities
- Stipends
- Cash awards

Team

A team entering a boat in the CSR competition must consist of:

- A minimum of 4 students.
- No more than 30 team members.
- At least 1 mentor but not more than 5 to guide the high school students.
- A minimum of 2 certified pilots.

Note: All team members and mentors must sign a liability and a photo-release waiver. Team members under the age of 18 must include a parent/guardian signature.

SMUD

Community Education & Technology Center 6301 S Street, MS A226 Sacramento, CA 95817

etcmail@smud.org

smud.org/SolarRegatta

Entry requirements and procedures

Each team is required to:

- Complete each task on the checklist prior to the competition.
 See Table A.
- Complete an application form.
 See Table B.
- Submit a SMUD equipment liability waiver in order to receive the solar modules. This document will be provided by the race organizer, after the application is submitted.

The equipment liability waiver will allow your school to take posession and use the solar modules.

If you competed in previous years and are still in possession of the solar modules, a new equipment liability waiver is NOT required.

- Teams must provide a completed W-9 to the race official no later than March 1, 2026. Any stipends or award winnings will be given to the person or institution listed in the W-9.
- Pilots must complete a swimming test to the satisfaction of the team mentor/team leader.
- Provide a SMUD liability waiver for each participant. Those under 18 must have a parent/guardian's signature. Appendix A.

- Provide a SMUD media release form for each participant. Those under 18 must have a parent/guardian's signature. Appendix B.
- Provide a copy of the California Department of Boating and Waterways Safety Certificate of Completion (or substitute agency certificate) for each pilot and/or crew member in the water. Other organizations which provide training, evaluation and certification may also be used.
- Provide a short video (2 minutes maximum) updating the event organizer on the production of the boat (See Table A for due date). This video will be judged for the "Best Video" award.
- Have at least 1 representative for high school teams watch the <u>California Solar Regatta</u> <u>"How to" workshop</u>. College attendance is optional.
- All teams must attend the mandatory orientation on Jan. 22 and 23. (See Table A for dates).

Check when complete	Task	Description	Due date
	Complete the CSR Application & Equipment Liability form and submit to etcmail@smud.org	This application commits to participation and provides the team contact information.	Friday, Nov. 7, 2025 Priority deadline
		release and waiver of liability form is for SMUD to loan 2 sol n needs to be completed every year that your team participa modules.	
	every year. You can continue using th	dules already from previous years, it's not necessary to pick u nem as long as their are no concerns. However, if your team d team to pick up your solar modules during the solar module t	oes not have solar
	Complete the W-9 Form and submit to etcmail@smud.org.	This form is important so we know who to make the check out to for the stipends and cash awards.	Sunday, March 1, 2026
	Watch the recorded California Solar Regatta <u>"How to" workshop.</u>	All high school teams are encouraged to watch this before California Solar Regatta application.	e submitting their
	Attend a California Solar Regatta general meeting.	Send a school representative if you can't make it. Race rules and regulations will be reviewed. If you have an idea or contribution to the event, this is the form for open discussion. Your team lead and co-lead will receive the calendar invite for these meetings.	Thurs., Jan. 22, 2026 4:30 - 5:30 p.m. Friday, Jan. 23, 2026 noon - 1 p.m.
	Solar module pick up	For those who need new solar modules, there are two times to pick up your solar modules at SMUD's Customer Service Center (6301 S Street, Sacramento).	Thursday, Feb. 19, noon - 5 p.m. Friday, Feb. 20,
		We'll confirm when your team can pick it up.	noon - 5 p.m.
	Attend office hours - virtual	NEW - This is optional for all teams. We're holding office hours for you to meet with the subject matter experts/ technical crew at SMUD to answer any questions you have about the Solar Regatta. This is an opportunity for you to share best practices as well. The project lead and the secondary contact will receive a calendar invite with details.	Thursday, Feb. 19, Thursday, March 19, Thursday, April 16 noon - 1 p.m. & 4 - 5 p.m.
	Send us an update regarding your progress via YouTube link to etcmail@smud.org.	Mandatory – Make a 1-2 minute video of your ideas, challenges and progress. Please check in with your progress-to-date. This is also an opportunity to share your concerns/challenges and to ask for advice or help. This video will be viewed by judges to see who wins "Best Video" award.	Sunday, March 1, 2026
	Submit boating certificates to etcmail@smud.org. Only those with boating certificates may participate in/on the water. Please allow 4 weeks for processing and mailing of certificate.	We highly recommended that boat drivers complete the California Boating: A Course for Safe Boating course exam by end of Jan. 2026 to ensure certificates are received before March 1. (\$10 course application fee) You may also choose another safety organization to award the boating safety certificate. Fees may apply.	Sunday, March 1, 2026
	Only participants who have turned in forms will get event wristbands and lunch tickets. Please note that those under 18 must have a parent/guardian signature.	Mandatory paperwork: Email a list of all participants, mentors and team leaders by last name to etcmail@smud.org (per team) SMUD Solar Regatta Liability and Media form (per individual)	Sunday, March 1, 2026
		Note: Late paperwork will be accepted and your team will be disqualified after March 1. Teams that submit their paperwork on time and complete will receive the \$150 stipend. Absolutely no exceptions.	
	Mooring numbers will be announced	Your team lead and co-lead will receive an email regarding your mooring number.	Friday, April 3, 2026
	Swimming test	Pilots must complete a swimming test to the satisfaction of the team mentor/team leader.	Before Regatta races

Dates/Times

May 1, 2026 - High School – Boats must be checked in by 8:30 a.m. on the day of the event. It's highly encouraged that boats complete the technical check and teams register early the night before. Early registration starts the night before. The event begins at 8:45 a.m. Camping will save time. You may check in the day before race day. Early check-in window will be shared leading up to the event.

May 2, 2026 - Post-secondary Competition – Boats must be checked in by 8:30 a.m. on the day of the event. It's highly encouraged that boats complete the technical check and teams register early the day of. The event begins at 8:45 a.m. Camping will save time. Early check-in window will be shared leading up to the event.

Boats not assembled and checked in by 8:30 a.m. on race day may not be able to race (based on race official's discretion) and will have 5 points deducted from their Regatta Cup point total.

Times are subject to change. Exact times are dependent upon number of teams competing and weather conditions.

Address

Rancho Seco Recreational Area 14960 Twin Cities Road Herald, CA 95638 1-800-416-6992

Visit **smud.org/RanchoSeco** for maps and important park information including directions.

Accommodation

CSR provides camping at the Rancho Seco Recreational Area. Camping is optional, but highly recommended. If you choose to camp the night before your event, tent camping in the Group Area location is FREE. This area is adjacent to the area where the boats will be moored. Please register your team prior to camping. See the event coordinator at the event site.

- 2 large fire pits are available for bonfires. Please use the area responsibly.
- You may set up volleyball nets and play sports on the grass areas. Bounce houses are not allowed.
- No alcohol is allowed in group campsites.
- Use of alcohol will result in expulsion from the park and competition.
- Quiet time is at 10 p.m.
- No generators, large gatherings or games are allowed after 10 p.m.

RV parking is available but isn't provided. RV parking with hook-ups will require a fee of \$40. Each RV site has a BBQ, fire pit, picnic table, drinking water and electrical outlets. Reservations are required and fees apply.

Visit smud.org/RanchoSeco.

There are additional tent campsites for family and friends on the south side of the lake. Reservations are required and fees apply.

The park closes at 6 p.m. No exceptions. Guests can use the call button at the entrance gate after 6 p.m. and will be let in until 9:45 p.m.



Guests

Each team may invite an unlimited number of guests. Friends and family are welcome but only Team Members (who have previously registered) may participate in the actual competition. Picnic tables and BBQs are available for use by non-registered guests. Guests may also register for the additional campground and RV sites at smud.org/RanchoSeco.

No popup tents are allowed in front of designated area delimited by American flags. All tents, in ground signs and camping equipment must be 25 feet from shore behind the line of American flags. This area must be kept clear for race officials and lifeguards to have a clear, unobstructed view of the lakeshore, lake and all activities, at all times.

We would like to encourage spectators at the races. Invite your school administration, friends and family to cheer you on. There's a lot to do at Rancho Seco Recreational Area:

Swimming – There is a roped off area with a sandy beach.

Boating – Watercraft can be launched at a variety of ramps (see page 29). Electric motor and paddle boats are available for rent.

Fishing – The freshwater lake supports bass, blue gill, crappie and catfish. A fishing license is required.

Hiking – The Howard Ranch Trail is a 7-mile loop through open grassland.

Wildlife – There's lots of wildlife and birds to see, including bald eagles on the north side of the lake.

Pets – Please make use of the dog park. Pets are not allowed in the Solar Regatta group campgrounds. If you bring a dog to the event, it must be on a leash at all times. Do not leave your pet unattended.

Parking

Your team will receive a post-event \$100 stipend to compensate for some of the parking fees. Parking is \$12/day per vehicle. There is no additional charge per person.

Bus parking is \$40/day. Please follow signs to the race area and do not park in the designated boat check in lanes. DO NOT park tow rigs in the parking lots. Tow rigs must park in the gravel lot, south of the group campsite (see map on page 28).

Registration check in

The team mentor/team leader must register student teams. Your team will receive a registration packet once your boat passes the technical inspection.

The envelope/packet will contain:

- An alphabetical list of all the registered students, team members and team mentors/ team leaders.
- 1 white wristband for each registered attendee.
- 1 green wristband for each registered pilot.
- 1 lunch ticket for each registered attendee.
- 1 Master Race Schedule.
- Your laminated boat number.

NOTE: Any students, team members or team mentors not registered will not be able to use the catering services. Any student not registered, as a pilot (indicated by a green wristband), will not be allowed on the boat or in the water.

Each team and individual team members must be registered by 8 a.m. on race day or the team will receive a 5 point penalty.

Boat safety

- Bring your tow vehicle down the coned passageway to the boat unloading area.
- You have 15 minutes to unload your boat and equipment and bring them to your assigned mooring area. DO NOT park your tow vehicle in this lot.
- Return and park tow rig in the designated tow rig parking lot (see page 28). DO NOT park tow rig in the visitor parking lot.
- Position your boat on saw horses (or any other object which raises the boat 3 feet) between the mooring flag and the line marked by American flags. This is considered the pit area. Your boat must be elevated before receiving technical inspection.
- Verify that your boat is 100% ready for inspection and that you have all of the safety equipment listed on page 16 before requesting a technical check. Solar modules should be installed, boat should be operable and students should be ready to answer questions.
- Contact the event organizer to request a technical check.
- Each boat must have a technical check the day before the race or by 8 a.m. on race day. You may not be allowed to race if you miss the check-in time. Once your team and boat has been reviewed by a safety inspector, you'll receive the registration packet.
- Each school or organization will have the required student and team information listed on a separate spread-sheet. If a student isn't pre-registered with SMUD, they won't be allowed to participate in the race or receive catering services.

- Students, team leaders and team mentors will be given event wristbands. The boat's pilots will be identified with a green wristband.
 Teams which fail to register in advance of the event won't be allowed to participate in the race or receive catering services.
- Each team must have 1 adult point of contact who will be the main source of information for the team. This contact will receive all SMUD communications, schedules and the meal tickets for the group. Each team will have 1 backup contact person in case of emergency.
- Team numbers will be assigned in April, once the team paperwork packet is submitted.
 The identifying boat number will also be your mooring location on the lake. You'll receive laminated boat numbers once you pass your technical check.
- Each team will be given a Race Schedule, which will list their time slots for races and presentation time.
- If the boat isn't undergoing any technical check or repairs, it must be moored in the water.



Design review

Technical judges will visit each mooring station to review technical, artistic and sustainability categories, which count towards Cup Points during the races.

- Judges will interview your team on these additional topics and cup points.
- Have students prepared to answer questions during the designated time reservation.
- Be ready to answer questions and explain the use of solar, wiring, design, materials or mechanical operation of your boat.

Help

SMUD employees and volunteers will be wearing red shirts. If you have a concern or a question, please find a volunteer.

Our employees at the SMUD Information Tent will be available to answer general questions. Minor first aid, sunblock and lip balm will be available.

If you have a technical question, please go to the Race Official tent.

Food

We'll provide a **FREE** breakfast and lunch.

Breakfast is based on a first-come, first-served basis (no ticket is required). Lunch is various sandwich options, vegetarian included. One lunch ticket is provided for each **registered** attendee. Lunch will be served from noon – 1 p.m.

Cold water will be available in plastic buckets at various locations along the shoreline.

The Rancho Seco Beach Snack Shack will be open 10 a.m. - 3 p.m. on weekdays and 10 a.m. - 5:30 p.m. on weekends depending on staffing. selling assorted candy, ice cream and packaged snacks. Other beach novelties and supplies are available for purchase.

Grills are available for use throughout the camping and picnic areas. Please use caution when cooking with flames.

We recommend bringing additional drinks and food. The nearest towns, lone to the east and Galt to the west, are 15 miles away.

Race information

Be sure to check in your boat upon entering the event area. Once your boat passes technical inspection, you'll receive your laminated boat numbers. Adhere the numbers to each side of the bow. You will receive your numbers once you pass the technical inspection. This will show proof that your boat can be on the water.

The Race Schedule can be accessed using the QR code provided to the team leads and posted at the SMUD tent and Race Officials tent. Look for your team's designated number as assigned to race entries. Your team MUST be prepared 15 minutes prior to each event.

In addition to the race schedule, a venue map, emergency contact numbers and a live scoring screen will be available online via a QR code.

Schedule of events

Date	Time	Event
Thurs., April 30, 2026	4 – 6 p.m.	High school boat and team registration. Camping.
May 1, 2026	8 – 9 a.m.	Breakfast served
High school race	7:30 – 8:30 a.m.	Prep boat and team registration. Safety check until 8 a.m. Late arrivals will lose 5 points.
	8:45 – 9 a.m.	Welcome and safety brief
	9 – 9:20 a.m.	Regatta group photo
	9:30 a.m. – 3:30 p.m.	Boat races and presentations – see Race Schedule for individual event times.
	noon – 1 p.m.	Lunch served
	3:30 p.m.*	Awards
May 2, 2026	8 – 9 a.m.	Breakfast served
		Postsecondary boat and team registration. Safety check until 8 a.m. Late arrivals will lose 5 points.
	8:45 – 9 a.m.	Welcome and safety brief
	9 – 9:20 a.m.	Regatta group photo
	9:30 a.m. – 3:30 p.m.	Boat races and presentations – see Race Schedule for individual event times.
	noon – 1 p.m.	Lunch served
	3:30 p.m.*	Awards

^{*} Time dependent on timely completion of races and weather conditions.



Award ceremony

All winners will be announced at the end of the last race, once judges have tallied the scores. The Award Ceremony will take place at the Presentation Stage. Trophies and awards will be given at that time.







Stipend

Team mentors/team leaders (1 per team) may be eligible for a stipend up to \$420. Please fill out a W-9 form. The check will be issued to the institution or person identified on the W-9. See Appendix C.

To receive a stipend you must comply with the following, participate in the event and submit a completed W-9. See Appendix C.

\$20	Completed boating certificates
\$150	All properly completed paperwork was submitted by March 1, 2026, as stipulated in the check list.
\$150	Team and boat registered before the competition begins.
\$100	Offset Rancho Seco parking fees.

All stipends and awards will be sent out in July 2026. All checks will be written to the person/organization as indicated on the W-9.

Promotional materials

If you'd like to promote the California Solar Regatta, you're welcome to use SMUD photos and videos. Like us on Facebook, @MySMUD, for regular updates. Post and share photos using #SolarRegatta2026. Please credit SMUD whenever possible and notify the event organizer of news releases.

Participants will release their rights to photos and video recordings taken by the event organizers. Photos may be used in promotional or future educational programs. Each student, team mentor and team leader **MUST** turn in a waiver. Participants under 18 must provide a waiver signed by a parent or legal guardian.

Media, advertising and logos

- This is an educational event that is often covered by media. Please wear conservative beachwear. T-shirts and shorts are appropriate. Do not shred, tear or alter T-shirts. No crop tops, see-through clothing or bikini bottoms. Do not go shirtless.
- It's encouraged that each team have uniforms or matching T-shirts.
- Please do not choose red T-shirts for your team. This will cause confusion with our employees and volunteers that will be wearing red and will need to be quickly identified in the event of an emergency. If red is your school color, opt for a white T-shirt with red accents.
- Please coordinate with our media personnel.
 Notify the race organizer of any media
 releases, or any other contact with media. If
 your team is located outside of Sacramento
 County, you may do your own media release,
 but please be courteous and notify the race
 organizer.
- All teams agree to be photographed and/or recorded while on the water or on shore by signing the media release.
- All teams are required to take a team photo with their boat and to participate in the Regatta group photo.
- The race organizer may request to place a video or GoPro camera on the team's boat.









Safety equipment

Floatie/Buoy	1 per boat.	Must be easily reached by seated boat pilot.
Life jacket	1 for pilot and others on the boat.	USCG approved, Type I, II or III worn by boat pilot(s).
Air horn	1 per boat.	Used for emergencies only. Must be easily reached by seated boat pilot.
Orange flag	1 per boat.	This flag must be displayed in the event of a breakdown. Must be easily reached by seated boat pilot.
Fire extinguisher	1 per boat.	USCG approved with a 1 pound capacity. Must be easily reached by seated boat pilot.
Paddle or oar	1 per boat.	Must be easily reached by seated boat pilot.
25 feet of rope	1 per boat.	Attached to center of the bow. Must be a minimum of .25 inches in diameter. The other end must be easily reached by seated boat pilot. Rope shouldn't be wrapped beneath your solar modules or other equipment, so it may easily be tossed to rescue boats in the event you need a tow.
Vented battery box	1 per boat.	Lithium batteries in a sealed, fireproof box. If you're using lead acid, use a vented box.
Protective footwear	Each participant in the water or on the boat.	Water shoes, sandals, tennis shoes.
Protective eyewear	1 for anyone handling the battery.	Sunglasses are OK.
Dead man or "kill" switch	1 per boat and for pilot.	This device shuts power to the motor if the pilot loses control of the craft. This device should be wired to disconnect power to the motor when the switch is shorted. It must be functional at all times when the pilot is in the boat, can be attached to the pilot and must be demonstrated during the technical inspection. It's advisable to get 2 kill switches as this is the part that tends to break down more often.
Walkie-talkie	1 for the pilot and one for the team mentor/team leader.	This is needed to communicate information between the team on shore and on the boat.
Velcro (or some- thing similar)	1 per boat.	To use to keep safety equipment stable and organized.





- ONLY those students wearing green wristbands (pilots) can be in the water past their knees.
- EVERYONE in the water must wear a life jacket and water shoes, sandals or sneakers.
- Have a safety word to yell, like "clear," before turning on the prop, whether
 on land or on water.
- Do NOT attempt to adjust or remove vegetation from prop unless the motor is disconnected.
- Do NOT walk in the "Keep Clear" walkway area in front of the pit areas.
- Stay hydrated. Buckets filled with iced water bottles will be found along the shoreline.
- Use sunscreen.
- If your boat sinks, do NOT attempt to retrieve it. Swim towards the SMUD rescue boat.
- If your boat gets stuck in the weeds, takes on water or you lose the ability to steer, put up your orange flag immediately! This is not only to signal rescue boats, but also alerts other boaters that you have lost control of your craft.
- Lost & Found is located at the SMUD information tent or race official tent.



Boat specifications

A solar-powered boat makes direct use of the sun's energy. The solar energy must be received exclusively by on-board photovoltaic cells. On-board energy storage into the battery bank is permitted. No additional batteries may be used for the propulsion of the boat, except for systems that don't impact the boat drive train. The design of the boat should only use solar as the form of energy (no wind, human or other source of energy is allowed).

Participating teams may either custom build a boat from scratch or modify an existing boat to create a solar-powered boat. The boats can't be longer than 20 feet (bow to stern) and no wider than 8 feet to allow for legal trailer towing. The solar-powered boats must use SMUD's provided solar modules.

Classes

High school will compete on Friday, May 1, 2026.

Post-secondary will compete on Saturday, May 2, 2026.

Solar module specifications

Any solar module that appears to be modified will be disqualified and must be removed prior to the race.

Teams must use JKM235P-60 loaned by SMUD.

Battery specifications

It's required that the team has a sealed battery container for LiOH batteries and a vented container for lead acid batteries. Water and LiOH batteries don't mix well (sealed container) and lead acid batteries (vented container) could off gas hydrogen during charging. We'll enforce the no shore charging as long as the weather permits charging the solar panels on board. The batteries should have a total rating of not more than 216-watt-hours.

Participants must bring a copy of the battery specifications in a clear, plastic sleeve envelope.

Motor/Drive specifications

The team can install a DC motor of their choice. The motor can't have any internal batteries and can't be changed out during the Regatta without race official approval. Props may be changed between races.

Boat and personal safety

- The Regatta Technical Inspectors will perform a full safety inspection of each boat prior to the Regatta. All boats must float and pass a technical inspection in order to be in the water to race.
- All boat pilots/passengers must have passed a boating safety course, be able to tread water for at least 1 minute and easily swim to shore.
- Life jackets and footgear are required for all participants on or in the water. Any team member not wearing footwear or a life jacket will be given 1 warning before being taken out of the race. The team mentor/team leader is responsible to assure swimming ability.
- Any accident or injury must be reported immediately to the event staff and lifeguards.
- Any team operating their craft unsafely will be given 1 warning by Event Staff. Further unsafe behavior will result in disqualification and possible ejection from the event.
- Make sure all safety devices, including fire extinguisher, air horn, flag, tow rope, are easily within reach of seated pilot.
- If your boat takes on water, stalls, loses steering or gets stuck, raise the orange flag to signal for a tow. You'll toss your fender, attached to your bow with rope, to the SMUD Rescue Boat. You can lower your orange flag during the tow.
- Make sure your kill switch is operable. The motor should stop automatically when the kill switch is engaged.

If your boat sinks:

- Wave the orange flag.
- Use the air horn with 3 short blasts.
- Immediately swim away from the boat.
- Do not try to retrieve the boat.
- Swim toward the rescue boat. A life ring will be tossed in your direction.
- Paddles or oars can be used to get your boat back to shore after a race to avoid becoming a safety hazard. Paddles or oars may not be used during the actual race.
- Each boat must have 25 feet of rope attached to the center of the bow and not be encumbered by the solar modules.
- A communication unit (walkie-talkies) to communicate with the team members on shore is required.

Boat repairs

- All repairs must be made on a raised surface like sawhorses and only in your designated pit area.
- Any damage must be promptly notified to the race official.
- After repairs have been completed, the Regatta Technical Inspector must reinspect.
- After repairs and inspections have been completed, return the boat to the mooring area.



Paperwork

Each team must supply, prior to competition, the application, the equipment loan agreement and release and waiver of liability form, an updated certificate of insurance per equipment loan agreement and release and waiver of liability form, a W-9 form and a list of all participants, mentors, and team leaders by last name. Each individual team member must submit a personal waiver. At a minimum, two team members need to submit boating certificates to be a pilot for their team. Lack of documents will prevent participation at the event without exception. All documents must be received by March 1, 2026. Team mentors/team leaders who submit their paperwork on time, complete and in order will receive a \$150 stipend. No paperwork will be accepted after March 1, 2026. Teams with missing/incomplete paperwork will be disqualified.

Documents can be submitted via Docusign:

- Team: Priority deadline: Nov. 7
 - Solar Regatta Team Application and the equipment loan agreement and release and waiver of liability
- Individual: (Due: March 1)

Solar Regatta Liability and Media Form

Or emailed to etcmail@smud.org:

- Team (Due: March 1): W-9 Form
- Team (Due: March 1): List of participants, mentors, and team leaders by last name
- Team (Due: March 1): Certificate of Insurance (refer to equipment loan agreement and release and waiver of liability form)
- Team (Due: March 1): Boating Certificates for a minimum of 2 pilots on your team.

Technical specifications at race

Any craft not in compliance with the rules will not be allowed to participate or will need to correct the deficiency prior to 9 a.m. on race day with permission from the Race Official.

Each team must have 1 student designated as the student boat engineer who will need to communicate directly with the Regatta Technical Inspector and be able to explain the mechanical, electrical, construction and technical operation details of the boat. The Regatta Technical Inspector will be able to add up to 3 points toward the Regatta Cup if the student boat engineer is able to completely describe the electrical system of the boat, or deduct 3 points if the boat or students are unprepared.

- The battery bank will be tagged for compliance and the tag must not be removed for the duration of the event. Unless directed by race officials, only 1 battery bank may be used.
 Once tagged, the battery or bank may not be swapped out unless directed by a regatta official.
- Boats may not be longer than 20 feet or wider than 8 feet.
- The maximum height above waterline is 5 feet.
- Boat materials must not be toxic or pollute the water.
- The pilot must be visible at all times.
- The throttle mechanism on the craft must be free moving and when released, must return to the zero current position.
- The battery/solar selector switch must be placed within each boat and in visual sight of the pilot. The motor switch must be easily visible to the Race Starter Officials who will check that the switch is in the correct position.

Technical specifications at race (Continued)

- The kill switch must cut power to the motor in the event of an emergency. Typically, one end of the lanyard is connected to the switch and the other is connected to the pilot. It is advisable to get 2 kill switches as this is the part that tends to break down more often.
- The pilot's cockpit must allow for easy entry/egress.
- The solar modules must be attached with mechanical fastening to the hull. The design should take into account the possibility of gusty winds.
- Boats must have their laminated boat ID
 number displayed on both sides of the bow. If
 the bow isn't in a good location, the safety
 official will choose a location to attach the
 number. The laminated signs must be properly
 affixed for the duration of the event to be
 easily seen from shore.
- Team names are recommended but optional.
- Race officials reserve the right to disapprove any graphics.
- In case of inclement weather, teams must bring a duplicate battery to be able to run the races on battery power.

Invasive mussel prevention and inspection

New emergency restrictions have been implemented at Rancho Seco Lake to prevent the introduction of aquatic invasive species. These measures are in response to confirmed detections of invasive mussels in nearby waters and across California, which pose a significant threat to our local ecosystems.

As part of these efforts, all registered participants with boats competing in the California Solar Regatta are required to undergo an additional aquatic invasive species inspection alongside the scheduled technical/safety inspections. This inspection will ensure that your boat, trailer and equipment haven't been in any body of water with confirmed Golden Mussel detections and are clean, drained and dry prior to launching in our waters. For the competition, be prepared to hand launch your boat. To assist with this process, review the California Golden Mussel **Detections live map**. If your boat or trailer has been launched in any waterbody associated with a confirmed sighting, you must report this to us immediately.

During the inspection, we will thoroughly check your boat and trailer to confirm the following:

- Clean: Is your vessel, trailer and/or equipment free of all mud, dirt, plants, fish and animals, both inside and outside? This includes flushing all live-wells, bilge areas, ballast tanks and cooling systems. Yes ___ No ___
- 2. **Drained:** Is your vessel, trailer and/or equipment completely drained of all water, including bilge areas, cooling systems, lower outboard units, ballast tanks, live-wells, buckets, etc.? Yes ___ No ___
- 3. **Dry:** Is your vessel, trailer and/or equipment completely dry, or has it been dry since its last use? Yes ___ No ___



Invasive mussel prevention and inspection (Continued)

To prepare for this inspection and help prevent the spread of aquatic invasive species, ensure your boat, trailer and equipment are Clean, Drained and Dry before arriving. You may reference this website for general clean, drain, dry procedures and best practices:

How You Can Help - Stop Aquatic Hitchhikers.

You may also visit a clean, drain, dry (CDD) inspection & decontamination station near you so your boat is "CDD ready" for our event:

Expect to Inspect — Clean. Drain. Dry.

If your boat or trailer has been launched in confirmed or suspected waters, you must report this to us immediately. Failure to do so may result in disqualification from the event.

More information will be provided regarding the invasive mussel inspection as the competition gets closer.

Procedure for check-in

Make sure that your boat is assembled and completely ready to be checked in. This area will be clearly marked by a numbered mooring flag. Do not proceed until you're ready.

At your technical inspection spot:

- Position your boat on the saw horses in the pit area.
- Your boat will receive a thorough inspection.
- Verify that your boat is 100% ready and that you have all the safety equipment before requesting the technical inspection.

- Contact event organizer to request a technical check. Each boat must pass a technical check on the day before the race or by 8 a.m. on race day.
- Technical check shouldn't take more than 15 minutes.
- Once you pass your technical check, you'll receive your team envelope/packet which will contain:
 - Meal tickets for all registered students and team mentors/team leaders.
 - Event wristbands for all registered students and team mentors/team leaders.
 - Pilot wristbands for all having proved a passing score for the boating safety exam.
 - Alphabetized list of all registered participants.
 - Race Schedule and Schedule of Events (may be subject to change so verify completeness).
 - Laminated boat numbers.
- Immediately upon passing inspection and receiving your boat numbers, securely tape your boat number to each side of the bow.
- Immediately move your tow vehicle to the gravel tow-rig lot. DO NOT park your tow rig or U-Haul in the main parking lot (see page 28).
- Once you've moved your tow vehicle you cann place your boat in the water and tie off to your mooring.
- Your boat can either be tied off in the water at our mooring station or on sawhorses at your designated pit station near your mooring number. Be careful as the slope has a steep incline.

Safety

It is the responsibility of the team to decide whether to compete in the events. Water sports can be unpredictable, therefore, involve an element of risk. Lifeguards will be on duty.

By entering the Regatta, each team and individual team member acknowledges that:

- Each team member, by signing the liability waiver, is aware of the risks involved in racing.
- The safety of the participants is the main consideration of the race organizer.
- Each team is responsible for the safety of the boat and all team members on shore and on the water.
- Each pilot and everyone in the water will wear a life jacket.
- No pilot will use a harness or seat belt.
- Each pilot will wear a safety "kill switch" release.
- All teams will be courteous to other boats, teams and observers.
- No pop-up tents, in-ground signs, flags or coolers in front of the area delineated by American flags in grounds. Race officials and lifeguards must have a clear, unobstructed view of the lakeshore, lake and all activities. They must also have clear and free access in the walking area.

Electronics

- Do not fly drones.
- No boom boxes within 100 feet of Race Announcer or Race Officials tents.

Weather or cancellation

The race organizer may cancel any race due to weather or any reason.

If there's rain, cloudy or lack of sun, races will be modified to have boats run on battery power for the sprint and slalom races. Have a duplicate battery available.

Events, judging and awards

It's the intention to conduct the following races: Slalom, Sprint and Endurance. The race courses will be set by the race organizer. Teams will be notified of any changes on the Race Schedule in the Race Official Tent.

Once a heat has been announced, the team racing next must be in the water near the event and ready within 5 minutes or the boat will be disqualified for that race.

There will be trophies and/or monetary awards for the following categories:

- Regatta Cup
- Slalom
- Sprint
- Endurance
- Presentation
- Technical
- Sustainability
- Artistic
- Drive Train Design
- Best Video
- Leading by Example
- Team Spirit
- Judge's Choice
- Grit & Gumption



Slalom race

Solar only – battery is switched off and not operable.

This race is coded in **orange** on the Race Schedule and marked by **orange** race flags on the course.

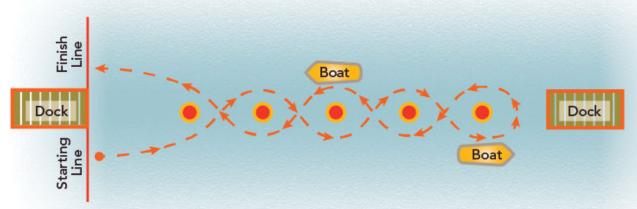
In this race, boats compete in a test of maneuverability and speed, moving through a specified obstacle course defined by a series of buoys, without hitting or missing any buoys. This is an individual competition. The winner of the Slalom Race will be the boat that completes the course in the quickest time.

- To begin the race, boats must arrive at the Slalom Race Starting Dock at their designated time.
- The pilot will communicate with the Slalom Race Starting Official to determine where to position the boat before the start.
- The pilot will verify with the Slalom Race Starting Official that the boat's battery switch is in the "OFF" position.
- The Slalom Race Starting Official will start the

race, monitor the race to assure the boat stays on course and doesn't miss or hit any buoys and times the race.

- The race will start with an air horn blast from the Slalom Race Starting Official.
- The boat will complete the Slalom Race course as indicated by the map below (approximately 150 yards in each direction). Please note the start and finish line locations.
- Hitting or missing a buoy will cost the boat a penalty, adding 20 seconds to the boat's racing time per incident.
- Each boat will make 1 timed run.
- At the completion of the race, the Slalom Race Starting Official will add any time penalty to the boat's racing time.
- Failure to complete the race will result in a score of "Does Not Finish".
- After the race is finished, the boat will return to its mooring location (or next race if applicable).
- The Slalom Race Starting Official's recorded time is final and will be reported to Race Official's tent.

Slalom race (single boat)



Sprint race

Solar only – battery is switched off and not operable.

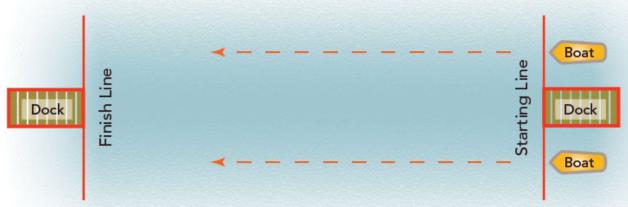
This race is coded in **red** on the Race Schedule and marked by **red** race flags on the course.

In this race, 2 boats will race side-by-side to see which is the fastest. This is an individual competition. The winner of the Sprint Race will be the boat that completes the course in the quickest time.

- To begin the race, boats must arrive at the Sprint Race Starting Dock at their designated time.
- The pilot will communicate with the Sprint Race Starting Officials at the Sprint Race Starting Dock to determine where to position the boat before the start.
- The pilot will verify with the Sprint Race Starting Official at the Sprint Race Starting Dock that the boat's battery switch is in the "OFF" position.

- The Sprint Race Starting Official at the Sprint Race Finishing Dock will start the race, monitor the race to assure the boat stays on course, and times the race.
- The race will start with an air horn blast from the Sprint Race Starting Official at the Sprint Race Finishing Dock.
- Each boat will complete the sprint race course as indicated by the map below (approximately 100 yards). Please note the start and finish lines.
- Each boat will race twice, approximately once in the morning and once in the afternoon. Please see Race Schedule for assigned times.
- Failure to complete the race will result in a score of "Does Not Finish".
- After the race is finished, boats will return to their mooring location.
- The Sprint Race Starting Official's recorded time is final and will be reported to Race Official's tent.

Sprint race (two boats)





Endurance race

Battery only – solar system is switched off and not operable.

This race is coded in **blue** on the Race Schedule and marked by **blue** race flags on the course.

In this race, a boat will test its endurance and battery effectiveness, racing around a designated course, as far as it can in 25 minutes. The boat must switch its pilot halfway in the race. The winner of the Endurance Race will be the boat that completes as many laps as it can around the course before running out of time or running out of battery.

- Boats must arrive at the Endurance Race Starting Ramps, located at the west end of the Mooring Area, at their designated time. Each boat is assigned a ramp, Ramp A or Ramp B.
 See the Race Schedule for race times and ramp assignment.
- This race requires 2 pilots. Midway through the race, the boat will return to its assigned ramp. Ten feet from shore, the pilot will turn off the motor to glide in. The change-out pilot will hold steady the boat and turn it around. The pilots will switch places and push the boat out. The motor can restart at 10 feet out. Buoys will mark this "no motor" zone. Teams not complying with the "no motor" zone will receive a 1 lap penalty.
- Boats do not have to run this race with the solar modules attached.
- Teams can't push their boat at the start of the race or when changing pilots.
- If any team tries to push their boat, are in the water without wearing shoes or operating in any unsafe manner, the Endurance Race Captain will give 1 warning before enacting disciplinary measures.

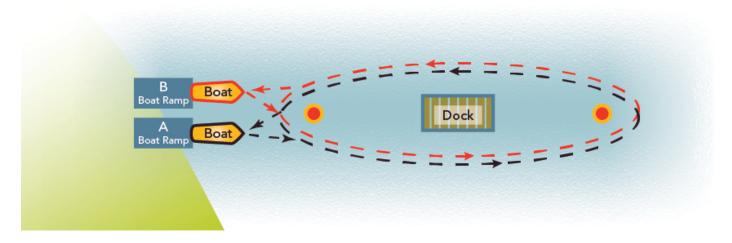
- To begin the race, the pilot will communicate with the on shore Endurance Race Captain at the Endurance Race starting ramps to determine where to position the boat before the start.
- The pilot will verify with the Endurance Race Captain that the boat's battery switch is "ON" and the boat's solar system is "OFF" and not operable.
- The Endurance Race Captain will start the race.
 The Endurance Race Official, located on the Endurance Race Dock, will monitor the race to assure boats stay on course.
- The race will start with an air horn blast from the Endurance Race Captain.
- Each boat will proceed along the specified route moving in a counter clockwise direction on the course layout (approximately 200 yards around buoys). Please see map on the next page.
- Boats will make as many laps as possible until a second air horn blast from the Endurance Race Captain is sounded (at about the 10-minute mark).
- At the sounding of the second air horn, pilots will return to their respective ramps (A or B) on shore, switch pilots and continue with the race.
- Only the 2 pilots will be allowed in the water.
- The Race will end at the sound of a third air horn blast from the Endurance Race Captain (at the 25-minute mark).
- Hitting or missing a buoy will cost the boat a penalty of reducing the total number of laps by ½ lap per incident.

Endurance race (Continued)

- The Endurance Race Official will record the number of laps by each boat, to the nearest quarter lap, and report the number to the Race Official.
- Failure to complete the race will result in a score of "Does Not Finish".
- After the race has ended, boats will return to their mooring locations, **not** to the Endurance Race Starting Ramps (A or B). A ½ lap penalty will be applied to any team that blocks or returns to the Endurance Race Starting Ramps.



Endurance race (two boats)





Presentation

10-15 minute student presentation about their boat, its design and operation.

This event is coded in **green** on the Race Schedule and marked by **green** race flags on the stage.

A presentation is an opportunity to earn points toward the Regatta Cup, which doesn't require money or technical skills. Student teams will give a short (10 – 15 minute) presentation on stage in the Presentation Area about their solar-powered boat. The presentation should be targeted to both a general audience and the Presentation Judges. After their presentation, students will take questions from the Presentation Judges. The winner of the Presentation Award will be the team that scores the highest total points from evaluations of the five topics listed below.

- Student Presentation Teams must arrive at the Stage in the Presentation Area at their scheduled time. Please see the Race Schedule.
- Access to a computer is not available. Students may use poster board or other handouts.
- Students may NOT bring their boats to the stage.
- Presentation time slots can't be rescheduled or postponed for any circumstances.
- Students must cover the following 5 topics:
 - -Sustainability What did the team learn about materials and the use of recycled or repurposed items?
 - -Technical design What was the inspiration for the mechanical systems? Why was a particular control system used?
 - **-Design** What was the inspiration and the reason for a particular design?

- -Solar Is there a working knowledge of solar/electric systems?
- -Teamwork Did students take the lead designing and working on the boat? Did all students have active participation?
- Up to 5 points will be awarded for each topic.
 The final presentation score will be the total of the scores in the 5 topics.

Additional awards

These awards are also factored into the Regatta Cup points.

Best Design, Technical – This is based on the Judges' decision for the best mechanical and electrical design.

Best Design, Sustainability – This is based on the Judges' decision for best use of recycling or repurposing of materials.

Best Design, Artistic – This is based on Judges' decision for most creative and artistic design or theme.

Scoring

A rubric will be used to tally points.

See Table D.

DNF (Does Not Finish) or DNQ (Does Not Qualify) will count as 0 points.

In the case of a tie, any supplemental awards received will be taken into consideration. Point penalties may be applied.

Cup championship points calculation

Event	1st Place	2nd Place	3rd Place	School/Points
Slalom	15	10	5	1. 2. 3.
Speed	15	10	5	1. 2. 3.
Endurance	15	10	5	1. 2. 3.
Presentation	15	10	5	1. 2. 3.
Technical	10	5	3	1. 2. 3.
Sustainability	10	5	3	1. 2. 3.
Artistic	10	5	3	1. 2. 3.
Check In Points	+3 to -3			1. 2. 3.
Winner				



Supplemental awards

These categories will also receive trophies.

Best Design, Drive Train – This is based on the Judges' decision for the best drive train design built from scratch (not bought).

Best Video – This is a SMUD award for the best boat design video. (Videos are due in March.)

Leading by Example – This is based on the Judges' decision for who has set the best examples in good sportsmanship.

Team Spirit – This is based on the Judges' decision for who has the best team spirit.

Judges Award – This is based on the Judges' decision to reward a team outside of the categories.

Grit & Gumption Award – This is based on the Judges' decision for a team that overcame challenges.

Prizes

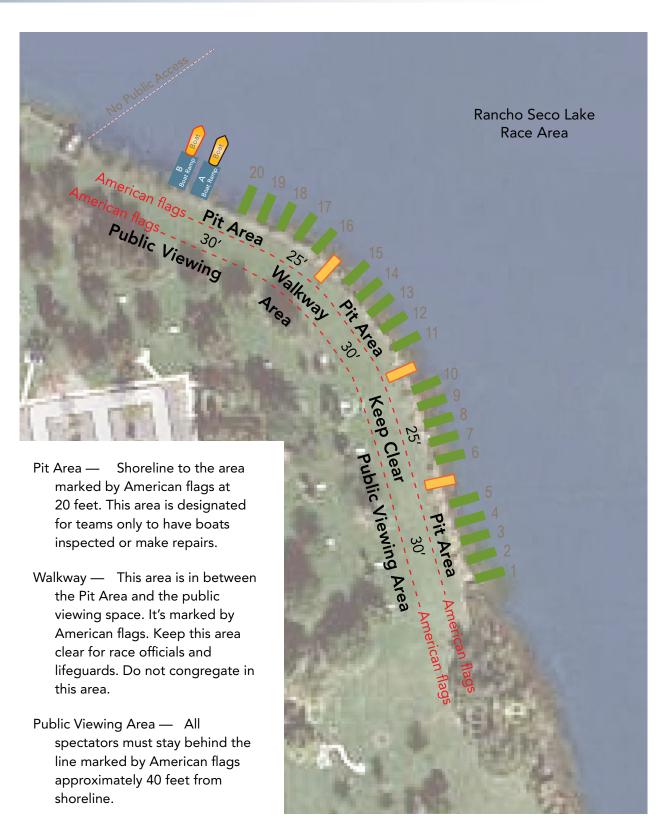
Trophies will be given for all Regatta Cup Categories, Additional Awards and Supplemental Awards.

The Regatta Cup winning teams will receive \$3,000. All teams must complete a W-9 form due by the January orientation. See Appendix C.

Reminder – All awarded checks for stipends and prizes will be made out in accordance with the W-9 forms submitted.

Table C - event map





Appendix A

Form WW 3 (Rev. March 2024) Department of the Treasury Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to www.irs.gov/FormW9 for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see Purpose of Form, below.																	
	1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregal entity's name on line 2.)										rded						
	2	Business name/disregarded entity name, if different from above.															
s on page 3.	3a	Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only one of the following seven boxes. Individual/sole proprietor							4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any)								
Print or type. See Specific Instructions on page	LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner. Other (see instructions)								_								
Pr Specific I	3b	Bb If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions						(Applies to accounts maintained outside the United States.)									
See	5	5 Address (number, street, and apt. or suite no.). See instructions. Requester's name a							and address (optional)								
	6	City, state, and ZIP code															
	7	List account number(s) here (optional)															
Pai	tΙ	Taxpayer Identification Number (TIN)															
Enter	VOL	r TIN in the appropriate box. The TIN provided must match the name given on line 1 to av	oid	Socia	l sec	ecurity number											
backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a</i>					_		_										
TIN later						er identification number											
Note:	If +I	ne account is in more than one name, see the instructions for line 1. See also What Name	<u> </u>	Empi	Oyer	er identification number											
		To Give the Requester for guidelines on whose number to enter.	and		-												
Par	t II	Certification									<u>'</u>						
Unde	r pe	nalties of perjury, I certify that:															
2. I ar Sei	n no vice	mber shown on this form is my correct taxpayer identification number (or I am waiting for of subject to backup withholding because (a) I am exempt from backup withholding, or (b) (IRS) that I am subject to backup withholding as a result of a failure to report all interest of ger subject to backup withholding; and	I have no	t bee	n no	tified	by the	Interr									
3. I ar	n a	U.S. citizen or other U.S. person (defined below); and															
4. The	FΑ	TCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting	ng is corre	ct.													
Certif	icat	ion instructions. You must cross out item 2 above if you have been notified by the IRS that y	ou are cu	rrentl	y suk	ject t	o backı	up wit	hholdi	ng							

because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

General Instructions

Signature of

U.S. person

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Sign

Here

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Glossary

Event

- SMUD Sacramento Municipal Utility District
- Regatta Cup Award for winning the whole Regatta
- California Solar Regatta (CSR) Official name
- Cup Races Endurance, Sprint, Slalom

Staff

- Event and Race Organizer Jennifer-Christine Balneg
- Race Official Any responsible official, on shore or on dock
- Race Captain Responsible race official on shore
- Race Starting Official Responsible race official on dock
- Event Staff SMUD employees and volunteers
- Regatta Safety Inspector Responsible race official conducting safety check and battery inspection
- Presentation Judges Responsible race official for judging presentations
- Judges Responsible race official for evaluating the additional awards and the supplemental awards

Location and detail

- Race schedule All races and presentation time schedule
- Individual race schedule Individual race and presentation time schedule
- Technical check and battery inspection What all boats must complete to be able to compete
- Battery inspection tag Tag placed on battery after safety check and battery inspection
- Identifying boat number Laminated number to be secured on both sides of the front bow of the boat
- Boat check-in area Area in parking lot where safety check and battery inspections are conducted and team packets are handed out
- Schedule of events Daily time schedule listing all activities
- Event map Map showing locations of all activities and races
- SMUD information tent General information and First Aid Tent
- Race Official tent Race coordination and Official Time/Lap Recording Tent
- Technical check-in Boat must pass a thorough check for safety prior to event registration
- Design review To be eligible for Cup points, teams must be interviewed by judges on the design and technical detail of the boat
- Pit area The location where the boat will be inspected and repaired. This area is between the shoreline and the line marked by American flags



Location and Detail (continued)

- Presentation area Area where opening information is given, presentations are made and awards are given
- Presentation stage Stage in presentation area
- Award ceremony Ceremony for race and presentation winners

Race detail

- Boat ramp Ramp from shore into water to launch boats
- Mooring location Individual location on shore where boats are secured
- Mooring area Area along the shore where boats are secured
- Dock Floating dock in lake where races start and finish
- Buoy Obstacle in lake for boats to maneuver around
- Race heat There are 2 Race Heats for the Sprint Race, 1 in the morning and 1 in the afternoon. Team will record the best time

Participant

- Team mentor Adult or teacher responsible for underage team members
- Team leader Captain or leader of the boat team
- Team member Registered as part of the school team
- Attendee Any registered student, mentor, or parent volunteer
- Pilot Student piloting the boat (must have a boating Safety Certificate)
- Crew member Team member not piloting the boat
- Student boat engineer Team member responsible for electrical and technical information about the team boat
- Spectators Those not actively participating in the races or competition

