New to the contest? Here is what you need to know.

1. **The contest is primarily for undergraduate students,** although we allow graduate students who are in the early stages of their studies to join a team. A team must be at least 50% undergraduates.

2. **The contest is modeled after an engineering Request for Proposals (RFP)**. It is not a science fair project. It involves a comprehensive engineering design, including bench-scale testing, as well as a business plan for implementing the full-scale design. Teams are also expected to address government regulations, community involvement/engagement, as well as health and safety issues.

3. **The projects are student-run**–entirely organized, designed, and built by students, with faculty serving as mentors for the teams.

4. **Teams should expect to spend 3-6 months on their designs prior to the contest.** The contest dates are reserved for oral presentations and bench-scale demonstrations.

5. **Teams select from 6 real-world tasks designed by engineering professionals** to meet an immediate environmental need. Alternatively, teams may identify their own topic and compete in the Open Task division. Teams interested in the Open Task are urged to examine other tasks offered to ensure they are designing a project that is sufficiently challenging. Judges are looking for sufficient rigor in team-designed Open Tasks.

6. **Team logistics**
    a. Teams provide their own transportation to/from the event, as well as their own lodging. On our website, we list hotels in the area.
    b. Some teams bring their bench-scale models with them; others ship them to us about one week prior to the contest.
    c. We provide one meal per day during contest hours (Dinner on Sunday & Wednesday; Lunch on Monday & Tuesday, and Taco Bar on Tuesday afternoon). An all-day snack table is available on Sunday, Monday, and Tuesday.

7. **Registration:**
    a. Registration opens online on the WERC Team Site in early November. This year, we are transitioning to a new platform. Watch for details.
    b. Faculty and students register as teams. A team registration covers one faculty member and up to 5 students. We offer discounts for multiple teams and charge a fee for additional team members. The registration fee covers less than 1/4 of our costs.
    c. One faculty member can sponsor multiple teams from their university. We offer a discount for bringing multiple teams to the contest.

8. **Timeline (see Team Manual for details):**
    a. Before arrival at the contest:
        - Teams usually start their research in the Fall semester and build their bench-scale models in the Spring.
        - Teams prepare an oral presentation, a conference-style poster, build a fully functioning bench-scale model of their design, and prepare a Flash Pitch presentation.
        - Tasks have benchmark deadlines in January and March. See the task problem statement for this year's submission dates.
            - January: All tasks require a 30% Project Review. The Project Review helps teams by ensuring they are heading in a path to success.
            - March: The ESP (Experimental Safety Plan). To ensure the safety of all attendees, our safety officer will guide each team through submitting their ESP to ensure that bench-scale prototypes are operated safely.
            - Early April: The written report is submitted online at least one week prior to the contest.

    b. At the contest, students present:
        - A Flash Pitch to a separate set of judges whose specialty is investing in business startups.
        - A slide show presentation (15 minutes) to environmental professionals (the judges).
        - A conference-style poster. This is posted on a display board (provided by WERC) and discussed with the judges.
        - A fully functioning bench-scale model of their design. For example, if the task is to filter a chemical out of water, the team will be handed a sample of impure water, run it through their bench-scale apparatus, and hand the judges their cleaned water sample. This sample is tested in our labs to determine the effectiveness of their apparatus. If the task is to measure soil moisture wirelessly, they place their sensor in soil and we test it against our sensors. We also test the ability to send the information to their data logger at a given distance.

    c. At the contest, the general schedule is:
        - Sunday: Check-in, Meet & Greet, Flash Pitch I, Dinner, Safety Meeting, Bench-scale setup.
        - Monday: Oral and Poster Presentations
        - Tuesday: Bench-scale Demonstrations, Decommissioning, Flash Pitch Finals, Game Night
        - Wednesday:
            - Morning—free time for teams while judges deliberate (explore White Sands National Monument, Organ Mountains, Prehistoric Trackways, A Mountain, and many others listed on our website).
            - Wednesday: Evening—Awards

9. **Audits:** Audits are a critical part of an engineering RFP and must be taken seriously. Use external auditors who have no prior knowledge of your project to help strengthen your technical report. Although not ideal, auditors may be from your university, provided they have not been involved in developing your project.

10. **Judging:** Judges want all members of your team to understand and be able to discuss your team's solution. They enjoy working with open-minded students who are eager to learn from their on-the-ground experiences. Judges look for thorough and complete Process Flow Diagrams (PFDs) and complete, realistic Economic Analyses. See the Team Manual for details and examples of these.
    a. Teams are judged by experienced engineering professionals who ask tough questions, but also encourage teams. They introduce teams to new ideas and approaches, and also appreciate the teams' innovations and forward-thinking.
    b. Each task is assigned to specific judges who remain with their task's teams for the duration of the contest.
    c. Judges individually grade the written report before the team arrives at the contest. Scores are tabulated on the WERC Team Site.
    d. Judges listen to the 15-minute oral presentations and are given 10 minutes after the presentation to ask questions. They will not interrupt the presentation. They first listen to all reports from the same task and then apply scoring to the oral presentations.
    e. Judges visit the bench-scale presentations, in groups of 2-3 judges at a time, for all teams in their assigned tasks. Since there are 4-6 judges, a team will be visited 2-3 times by judges. At the bench scale, judges take the time to delve more deeply into each team's design. Students often comment that this is their favorite part of the competition because they can demonstrate their prototypes and they feel they are treated as peers by the judges, instead of being "judged."
    f. On day 4, judges convene to determine the awards (see below for award information) while the teams have a free day to explore the area. We hold the Awards Banquet in the evening.

11. **Awards:** Each year, WERC and its sponsors award more than $30,000 in cash prizes. Successful completion of every stage of the project qualifies teams for the following awards. See our website for award details. *Award amounts listed below are contingent upon funding.*
    a. Task awards ($2500 - $1000, $500)
    b. Bench-scale Awards ($1000 - $750 - $500)
    c. The Flash Pitch Award ($1000 - $750 - $500)
    d. EPA Pollution Prevention Award ($1000)
    e. Judges' Choice Award ($500)
    f. Peer Award ($250)
    g. Terry McManus Outstanding Student Award. ($500). Faculty nominate a student from their team.