Sunrise on the west side of the Organ Mountains, Las Cruces, NM

2026 TEAM MANUAL

Your source for:

- WERC policies and deadlines
- Event Rules for: Tech report, Oral and Poster Presentations, Bench-scale Demo, Flash Pitch
- Scoring rubrics
- Experiment Safety Plan (ESP) requirements
- 30% Project Review

Know the contest requirements

- Read the entire manual aloud as a team (Policies, Rules, Rubrics).
- Read the Task Problem Statement aloud as a team at least once/month.

New this year:

- This *Team Manual* contains only policies and regulations.
- The *Team Success Guide*, published separately, contains helpful hints and contest philosophy to help teams compete effectively.
- Academic Integrity Statements and a Business Plan Checklist have been added to the *Manual*.
- Tabs added to *Manual* sidebars for easier navigation
- The WERC Team Site (for registration, submissions, and scores) has moved to: WERC Team Site (hosted by the Institute of Competition Sciences).
- 30% Project Reviews are requested in January for every project.
- Reserve an Oral Presentation practice room prior to arriving at the contest.
- The Flash Pitch Presentation will identify your institution.

2026 WERC ENVIRONMENTAL DESIGN CONTEST
TEAM MANUAL

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CONTACT INFORMATION

- WERC policies, operations, or task questions: werc@nmsu.edu or gscarbro@nmsu.edu
- Program Manager, Ginger Scarbrough, cell: 575-312-7623
- Safety Officer: miljgh@nmsu.edu
- Website: FAQs, published tasks, general info: https://werc.nmsu.edu:
  - Task-specific FAQs: 2026 Tasks/Task FAQs
  - General FAQs: 2026 General FAQs
- Team site: Register, submit reports, view judge scores & comments: https://www.competitionsciences.org/competitions/werc-2025-26/

PART I: CONTEST DATES AND DEADLINES (*Subject to Change*)

2026 WERC Environmental Design Contest Dates and Deadlines *(Subject to change)*		
Date	**Action Item**	**Details**
This Fall, 2025	Reserve your spot	Email us to reserve a spot for your team – send the Task number!
Weekly	Check FAQs for updates:	Task-specific FAQs: 2026 Tasks/Task FAQs General FAQs: 2026 General FAQs
Nov 1, 2025 – Dec 31, 2025	Early Bird Registration	• Registration at: WERC Team Site • $100 discount/team, in addition to multiple team discounts
Upon Registration	Team Photos	Upload Traditional & Fun team photos to Team Site after registering. WERC uses these for: social media and contest slideshows.
Fall 2025	Research, design, order materials, outline report.	• Prior to the contest, follow your institution's safety protocols for laboratory work. • Begin to look for auditors
Dec 1, 2025 – Jan 30, 2026	30% Project Review Due	• Submit any time within this time frame. • Teams starting their project in Spring 2026 may request an extension to submit the Project Review.
Dec 15, 2025 – Feb 20, 2026	Complete the On-Demand Course: *Preparing the ESP*	• Required of all team members. • Team Leader: Email us for the course link(s) and share with your team.
Feb 17, 2026	Final date to register a team.	Late-coming teams will be considered on a case-by-case basis. We will try to make accommodations.
Feb 27, 2026	NCEES Licensure Presentation (Optional)	NCEES staff Lehmon Dekle and Kris Goodenow have kindly offered to host a webinar to help you get started preparing for the FE Exam. Registered teams will be emailed a link.
March 9-13, 2026	Submit ESP	Must be submitted on time to run a bench-scale demonstration. Required of all teams. See ESP course for details. Email ESP to Safety Officer Juanita Miller (miljgh@nmsu.edu)
March 12, 2026	Request Audits no later than this date	Send draft report to three separate auditors (economics, legal, and health & safety). Correct report as needed.
March 30, 2026	Submit Equipment Transportation Form (Optional); Request practice room time slot.	• Submit Transport Form 10 working days before the contest if shipping items to Las Cruces. • Complete Practice Room Request Form (Rooms available Sunday 12p – 3:45p)
April 2, 2026	Submit Tech Report	Submit through Team site
April 6, 2026	Submit Flash Pitch slides and Summary	Submit through Team site
April 12-15, 2026	Contest in Las Cruces, NM	NM Farm & Ranch Museum 4100 Dripping Springs Rd. Bring: Oral presentation, poster, bench-scale apparatus.
Sunday April 12, 2026	Noon – 7:40 pm Noon – 9 pm	Check in, Meet & Greet, Flash Pitch Round I, Banquet, Safety Brief. Bench area open till 9 pm.
Monday, April 13, 2026	8 am – 4 pm 8 am – 8 pm	Oral presentations, Lunch, Poster Session. Teams may stay until 8 pm to run/test bench-scale demonstrations.
Tuesday, April 14, 2026	8 am – 5 pm	Bench-scale demos, Lunch, Bench-scale Decommissioning at 2 pm, Flash Pitch Final Round, Game Night
Wednesday, April 15, 2026	5:30 pm – 8:30 pm	Morning: Free time for teams (while judges deliberate) Evening: Awards banquet

ON-SITE CONTEST SCHEDULE OF EVENTS – APRIL 12-15, 2026

(Schedule subject to change)

Sunday, April 12: *Casual attire all day, except as noted*

1:00 – 4:00 PM: Check in; bench-scale setup; presentation rooms open for practice

4:00 – 5:00 PM: WERC Welcome and Team Meet & Greet

5:00 – 6:15 PM: Flash Pitch, Round I (*Business attire for presenters*)

6:15 – 7:15 PM: Dinner and Keynote Speaker

7:20 – 7:40 PM: Mandatory Safety Meeting for all faculty and teams

7:40 – 9:00 PM: Bench-scale setup and commissioning

9:00 PM: Bench-scale area closes

Monday, April 13: *Business attire for Oral and Poster presenters.*
Laboratory attire required all day in bench-scale area: goggles, long pants, close-toed shoes.

8:00 AM – 8:00 PM: Bench-scale area open for equipment setup and operation

8:00 AM – 12:00 PM: Final commissioning; synthetic solutions distributed

8:30 AM – 1:00 PM: Oral Presentations

1:00 – 1:45 PM: Lunch Served

2:00 – 4:00 PM: Poster Session

8:00 PM: Bench-scale area closes

Tuesday, April 14: *Laboratory attire required all day in the bench-scale area: goggles, long pants, closed-toe shoes*.
Business Attire for Flash Pitch presenters, Casual attire at Game Night

8:00 AM – 2:00 PM: Submit bench-scale sample results when ready.

8:30 AM – 12:00 PM: Bench-scale Demonstrations: Judges visit booths

12:00 – 12:45 PM: Peer Judging Session

12:45 – 1:30 PM: Lunch Served (Faculty Advisors Lunch Meeting)

1:30 – 3:00 PM: Bench-scale area decommissioning and waste disposal;
Advisors must be present for their team's decommissioning

3:00 – 4:00 PM: Flash Pitch, Final Round (*Business attire for presenters*)

4:00 – 5:30 PM: Reception: Music and games in the courtyard. Taco bar. (*Casual attire*)

Wednesday, April 115:

Morning and afternoon: Teams have free time while judges deliberate

5:30 – 8:30 PM: Awards Banquet and Ceremony. Dinner served.

Thank you for joining us! Keep in touch.

PART II: GENERAL CONTEST POLICIES AND REGULATIONS

1. **The contest is an on-site contest in Las Cruces, NM.** No remote entries will be accepted, unless national or local emergencies warrant the entire contest transitioning to a virtual event (*see below for details*).
2. **The projects are student-run**–entirely organized, planned, designed, and built by students.
   a) Students, particularly the Team Leader, are the primary contact between WERC and your team.
   b) Faculty are mentors only. The faculty advisor's role is advisory only. Students should conduct all project work independently. During the on-site contest, Faculty advisors may attend their students' presentations as observers. They are not to contribute to the discussion.
3. **Include your Team Number in all correspondence.** Your number will be assigned upon registration.
4. **Team Formation:** Teams can be of any size, and a university may register any number of teams (space permitting). WERC must limit the total number of registered teams to 34, due to space constraints.
5. **Contest Roles:**
   - Advisor: A faculty member who will attend the contest in person. The Advisor registers and pays for the team.
   - Co-Advisor(s): Additional faculty member(s) who plan to attend the contest in person (or who would like to have a t-shirt and other SWAG from the contest). The Advisor should assign the Co-Advisor to the smallest team to potentially reduce registration fees, since the fee structure is based on the number of people per team.
   - Team Leader: One student team member appointed by the Advisor who is primarily responsible for uploading files to the WERC team site.
   - Team Members: Student team members.
   - All roles above:
     - Are included in the team-member count when computing registration fees.
     - Can log in to the WERC team site to check deadlines, submission status, and view team scores after the Awards Ceremony.
6. **Registration:** See registration fees and discounts details online (werc.nmsu.edu).
   a. After registering, teams become eligible to receive any materials specified in their task statement.
   b. Registration opens online in early November at the WERC Team Site (hosted by ICS).
   c. Registration Fees. Registration fees will not be refunded, except in the event of unavoidable circumstances. In that case, the team will be reimbursed for fees paid minus the team's portion of expenses incurred at the point they exit the contest, including the cost of materials ordered for your team and the cost to ship items to your team, if applicable.
7. **Meals:**
   a) Indicate meal preferences during registration. If we are able to accommodate special needs, we will email you with instructions for working with our caterers during the contest.
   b) If your restrictions cannot be accommodated, we will email you to request that you arrange your own meals while in Las Cruces. Your safety and your standards are of the highest priority to us, and we have learned over the years that some restrictions (such as Halal and severe allergies, such as black pepper) cannot be safely accommodated, due to our caterer's limitations.

8. Academic Integrity

Integrity in engineering practice is essential to professional development and to the credibility of the solutions presented at the WERC Environmental Design Contest.

WERC upholds the highest standards of academic honesty and ethical conduct. All work submitted must represent the team's own effort, knowledge, and creativity. Plagiarism, falsification of data, or misrepresentation of contributions will result in penalties or disqualification. Teams are expected to:

- Accurately credit all sources of information and assistance.
- Maintain transparency in the use of all software, data, and AI tools.
- Ensure that all submitted work reflects genuine understanding and team collaboration.

9. Artificial Intelligence (AI) Policies: To ensure that AI tools are used ethically, transparently, and in support of student learning, not as a substitute for individual or team effort, WERC has established the following policies.

- All use of AI tools must be properly documented and cited. When in doubt about permitted usage, please ask for clarification.
- Teams must verify the accuracy of all AI-generated information and ensure that all final submissions reflect their own technical understanding and decision-making.
- Misrepresentation of AI-generated work as original human effort may result in penalties or disqualification.

a) **Permitted Use.** Teams may use AI tools (for example, ChatGPT, Copilot, Elicit, Grammarly, MATLAB Copilot) for support tasks that enhance learning or efficiency, including:

- Literature review assistance or brainstorming ideas
- Fine-tuning research questions;
- Drafting an outline to organize thoughts;
- Minor editing for grammar and style;
- Visualization or diagram assistance;
- Preliminary cost or design estimates.

b) Prohibited Use. AI use is not permitted for:

- Completing work that your group assigned to you, unless all members of the team agree that your use of the tool falls within the Permitted Use;
- Generating a draft of an assignment;
- Generating entire sentences, paragraphs, papers, or presentations to complete WERC tasks;
- Fabricating or directly copying data, citations, or analytical results;
- Misrepresenting AI-generated work as solely human-created;
- Uploading proprietary or confidential WERC materials into public AI tools

c) Disclosure Requirement:

Each team must include a brief *AI Use Statement* in the appendix of their final written report describing:

- Which AI tools were used;
- For what purpose;
- How the team verified accuracy and maintained integrity.

Sample statement:

"*Team Intrepid* used ChatGPT to refine technical writing and assist with early-stage brainstorming. All technical calculations, data analysis, and design decisions were performed and verified by the team members."

10. **Sponsor Engagement:** Acknowledge your Task Sponsor on all materials (Reports, Slides, handouts, social media).
    a) Your Task sponsors are truly sponsoring your contest participation. Their contributions significantly reduce your team's registration fees by covering half of your dining expenses, all of the SWAG, analytical testing costs, cash awards, trophies, and above all, the time of their valued engineering staff.
    b) Thank them for their contributions. Be sure to spell the company's name correctly.
    c) Company Logos are posted on our website.

11. **ESP Approval of the Bench-Scale Prototype:** Teams must meet all deadlines for submitting the Experimental Safety Plan (ESP). Failure to do so will result in not being able to bring the prototype to the contest.

12. **Main Contest Judging:**
    a) For Task awards (Overall Task Awards and Bench-scale Demonstration Awards), teams are judged only against other teams that participated in that task. If fewer than three teams enter a task, their project may be combined with another task for judging and award purposes.
    b) For non-task-specific awards (NMSGC Award, Freeport-McMoRan Award, Flash Pitch, Judges' Choice, Peer Awards), all teams will be considered. For the Terry McManus Outstanding Student Award, individual students will be evaluated against all other students.
    c) A team entered in a defined task (Tasks 1–6) may request to move to another task (typically the Open Task) any time before submitting the Technical Report if their project significantly departs from the original Task goals. Teams may also request this change on Monday after Oral Presentations. When considering a change, review the bench-scale rubric: 1) the apparatus solves the stated problem, and 2) it demonstrates all required steps. All task-change requests will be evaluated on a case-by-case basis.
    d) Scores are tabulated on the WERC Team Site. Teams can view their scores after the Awards Ceremony.
    e) Experienced engineers judge and mentor the teams during contest judging (April 12-15, 2026). The judge's role is to treat the teams as colleagues, encouraging them and introducing them to new perspectives.
    f) Teams that have concerns about specific judges should immediately bring this to the attention of the Task's Lead Judge and/or the WERC Program Manager.
    g) Each team will meet with the same group of 4-6 judges throughout the contest, allowing teams and judges to get to know each other. If numbers permit, the same group of judges will evaluate all teams within a given task. If this is not possible, judges will be overlapped strategically.
    h) Event Judging:
        - Judges score the written reports before teams arrive at the contest.
        - Monday morning: judges listen to the 15-minute oral presentations. They are given 10 minutes after the presentation to ask questions. After all presentations for the same task are complete, judges apply final scoring to the oral presentations.
        - Monday afternoon: judges score the Poster Session in groups of 2-3 judges at a time, for a total of up to 3 judge visits. Other judges and visitors may also visit your poster presentation.
        - Tuesday morning: judges visit the bench-scale demonstrations in groups of 2-3 judges at a time, for a total of up to 3 judge visits. Teams will:
            - Present their apparatus and discuss the rationale behind each element of the design.
            - Display their poster to use as a reference during the bench-scale demonstrations.
            - Answer questions they were unable to answer during the oral presentation.

        i. Tuesday Afternoon: Flash Pitch Final Round: Invited teams present their Flash Pitch to the Final Round judges. All contest participants are invited to attend.

        ii. Tuesday marks the end of judging. On Wednesday morning, teams are free to explore local sites while judges determine awards (See: Explore Las Cruces).

13. **Flash Pitch Judging.** The Flash Pitches are evaluated by a separate set of judges whose focus is economic development, technology transfer, and commercialization. Flash Pitch judges will not have read the technical report—they will judge solely on the one-page summary and the Flash Pitch presentation.

14. **Team logistics**
    a) Teams provide their own transportation to/from the contest as well as their own lodging.
        - Find travel tips on our website ("Plan your Visit" tab).
        - Recommended: Arrive on Saturday night and leave Thursday morning. Keep in mind:
            1. First Day: Sunday. Registration noon – 4 PM. This is a critical time to begin setting up the Bench-scale prototype. This gives you time to troubleshoot and start a local shopping list for omitted or damaged items. Early check-in allows time to utilize a presentation practice room. The Flash Pitch Round I is scheduled for Sunday evening.
            2. Last Day: Wednesday. 8:30 PM marks the end of Awards Night.

    b) The main contest events are on Monday and Tuesday.

    c) The Flash Pitch Round I is on Sunday, and the Final Round is on Tuesday, just before Game Night.

    d) Game Night is Tuesday evening, and the Awards Banquet is on Wednesday evening.

15. **Publishing in WERC's IEEE Conference**
    The WERC IEEE Conference provides selected contest teams with the opportunity to expand their projects beyond the competition. In past years, approximately 30% to 55% of WERC technical reports have been invited to develop full papers for peer review and possible publication with IEEE.

    a) All written reports submitted to the Design Contest are considered for publication in IEEE *Xplore*.

    b) Approval for publication is based on judges' review of the paper.

    c) Invitation to submit a paper will be announced during the Award Ceremony, April 15, 2026.

    d) Submission instructions will be emailed to invited teams.

    e) A team need not win a prize to be invited to publish in the proceedings.

    f) Faculty Advisors may be included in the list of authors.

    g) All papers are subject to meeting IEEE Xplore's scope and quality requirements.

Transportation of Bench-scale Equipment

- Teams may decide how to transport their bench-scale equipment to the contest. Some bring it with them, but those traveling long distances usually prefer to ship their equipment to us.
- Teams that ship their equipment to us must complete an Equipment Transportation Form a minimum of 10 working days prior to the first day of the contest.
- Whichever way you bring your equipment:
    - Create a Parts Checklist to ensure that all parts are delivered to the contest.
    - Do not transport hazardous chemicals. We will have the test solutions/testing equipment specified in your task statement ready for you in Las Cruces. Contact NMSU's Chemistry Stockroom for additional chemicals your team may need.

Remote Contest Contingency Plan

WERC has thirty-five years of experience hosting the contest onsite in Las Cruces and two years of successfully running it remotely. If necessary, due to national health protocols or other reasons, we will transition to a virtual contest. In that case, an updated Virtual Contest Manual will be released.

Intellectual Property

Our task problem statements require innovative solutions to current environmental issues posed by our sponsors. We want to protect your intellectual property while allowing the task sponsors to further explore your team's ideas after the contest.

The WERC Environmental Design Contest Intellectual Property Policy:

1. The intellectual property produced as a result of participation in the WERC Environmental Design Contest:
   a. belongs to the team, its members, and/or its institution, according to the team's institutional policies.
   b. may be used without charge by NMSU and WERC task sponsors for their specific purposes.
2. Publication rights for the written report, or any publication that results from the report, belong to the team and/or its institution, according to the team's institutional policies. Teams that publish their results in IEEE *Xplore* will transfer copyright to IEEE, as per IEEE policy.
3. In cases where the intellectual property is used for commercial applications, the benefits and any potential income will belong to the contestant's college or university, according to the team's institutional policies.
4. Any IP previously established and used in the contest will remain the IP of the original owner.
5. NMSU/WERC does not warrant that any IP produced as a result of participation in the WERC contest would not violate any intellectual property rights owned by other parties.

Awards

Each year, WERC and its sponsors award more than $30,000 in cash prizes.
Successful completion of every stage of the design project qualifies teams for the following awards.
Award amounts listed are subject to change based on the availability of funding.

1. Task awards (First Place: $2500, Second Place: $1000, Third Place: $500)
2. Bench-scale Demonstration awards (First Place: $1000, Second Place: $750, Third Place: $500)
3. Freeport-McMoRan Innovation in Sustainability Award ($2500)
4. New Mexico Space Grant Outstanding Team Award ($2500)
5. WERC Resources Center Pollution Prevention Award (P2 Award) ($1000)
6. Judges' Choice Award ($500). Up to three teams may win.
7. Peer Award ($300). Teams vote on their favorite designs. Three teams will win this award.
8. Terry McManus Outstanding Student Award ($300). Faculty members nominate a student from their team. Up to three students may win.
9. The Flash Pitch awards (First Place: $1000, Second Place: $750, Third Place: $500).
10. Additional awards may be announced at a later date.

For information on the selection criteria for each award, see the Team Success Guide.

PART III: EVENT RULES

III-A. Technical Report: Manuscript Specifications and Regulations

1. **Rubric:** Contest Scoring for Task Events

2. **Page limit:** 27 pages, including report cover page, table of contents, executive summary, report body, figures, tables, references, and appendices. The audits are not included in the page count.

3. **Page order:**
   - Cover page
   - Table of Contents
   - Executive Summary
   - Body of Paper
   - References
   - Audits

4. **Cover page** (Title page):
   - ***Title:*** 2" top margin, 1" minimum side and bottom margins, 14-point type
   - ***Center:*** 12-point type. School name, team name, optional team logo, task number, advisor and team member names
   - ***Spacing*** between title entries (school name, team name, etc.): 1.5 line

5. **Table of contents**
   - ***All margins:*** 1" minimum
   - ***Type:*** 12-point type
   - ***Justification:*** Left and right justified
   - ***Spacing:*** 1.0 – 1.5 lines, as appropriate to your format

6. **Executive summary and body of paper**
   - ***All margins:*** 1" minimum; left justified with ragged right edge
   - ***Spacing:*** 1.5 lines
   - ***Type:*** Title: 14-point, Body: 12-point.
   - ***Page limit:*** Maximum of two pages. Preferably one page. Include mostly data and findings – no fluff.

7. **Footers:** Required on each page
   - ***School name and task number:*** Centered
   - ***Page number:*** Centered below school name and task number

8. **Headings:**
   - ***Title:*** Center, upper case, bold; 14-point type
   - ***Major Headings (Level 1):*** Flush left, Title Case, Bold, 12-point type
   - ***Subheadings (Level 2):*** Flush left, Title Case, Bold Italic, 12-point type
   - ***Sub-subheadings (Level 3):*** Indented, Bold, Title Case, End with a period, 12-point type
   - ***Fourth-level headings (Level 4):*** Indented, Bold Italic, Title Case, End with a period, 12-point type
   - ***Leading below headings:*** no more than 6 points. (Leading=vertical distance between lines of text)

9. **References**
   - ***In text***: Use superscript numbers when referring to references in the text.
   - ***Reference list:*** List and number all bibliographical references at the end of the paper.

10. **Equations**
    - ***Variables:*** Italicize variables in equations.
    - ***Placement:*** Center equations; right-justify equation numbers and enclose the numbers in parentheses. (*Hint for aligning these: enter equation and its number in a 1-row, 2-column table*)

11. **Figures and Tables**
    - ***Numbering:*** Number figures and tables consecutively within the text (Figure 1, Figure 2, etc.)
    - ***Figure Captions:*** flush left below the figure; include figure number; description in sentence case.
    - ***Table Titles:*** flush left above the table; include table number; description in sentence case.
    - ***Clarity:*** Lines and images within a figure should be sharp and easy to read. Include a legend where needed.
    - ***Legibility:*** All lettering should be large enough to be readable (minimum 10-point type)
    - ***Size:*** Illustrations should fit within the 8.5" X 11" page (with proper margins). Be sure all elements are readable.
    - ***Placement:*** Figures and tables should be placed in the document in the order in which they are referred, closely after (not before) they are referenced in the text.

12. **Symbols and Abbreviations**
    - ***Standard:*** Use only standard symbols and abbreviations in text and illustrations.
    - ***Defining:*** Define all abbreviations the first time of use by stating the full name and adding the abbreviation in parentheses (even if you think the abbreviation is obvious, define it–it may not be obvious to every reader).

13. **Audits**
    - ***Format:*** Audits have no specific formatting requirements, but should be on company letterhead, if possible.
    - ***Voice:*** Auditors should format their audit in a professional manner that is appropriate to their field of expertise.

Submitting the Technical Report

- Upload one PDF or .docx of the complete report, including audits, to the team's WERC account.
- Only registered Advisors and student Team Leaders have access to upload the report.
- Deadline for Written Report submission**: 11:59 PM, April 2, 2026** (your time zone).
- Late reports will be penalized by 25 points per day.
- Re-submitting your report will replace the previous version and update the time stamp. Use caution if resubmitting after the deadline, as this might affect the late penalty.

Required Elements of the Technical Report (*See details in Team Success Guide*)

1. The paper must include

- Report cover page identifying the task, team number, school name, advisor(s), and team members
- Table of contents (include page numbers)
- Executive summary (maximum of two pages) highlighting the proposed solution (see #2, below)
- Report body, including PFD, figures, illustrations, photographs, and graphs (see #3, below)
- References
- Audits (See #5, below)

2. Executive Summary

- Judges use the Executive Summary as a reference. It is a concise overview of the entire project.
- From the executive summary, the reader should understand the task, the options considered, the process selected, the project costs, performance, schedule, and the conclusions reached.

3. The body of the paper must include (See *Team Success Guide* for full discussions of these sections):

- Background research: options considered and discussion of alternative designs and situations in which those designs might be better than your team's proposal.
- Description of your team's solution.
- Detailed diagrams that outline the system flow, such as process-flow diagrams (with mass and energy balances, as appropriate. Include input and output rates, reactants, and reaction rates, etc.), system schematics, computer architectures, and diagrams that outline instrumentation, control systems, power flow, circuits, etc. To meet judge expectations for the PFD, see examples in the *Team Success Guide*.
- Test data and technical evaluation of the performance of your team's solution. These often include experimental runs that cannot be duplicated at the bench-scale demonstration.
- Bench-scale/prototype lab results.
- Business Plan: Full-scale design description, calculations, CAPEX and OPEX, appropriate economic visualization tools, and implementation schedule. See Business Plan Checklist below for more details.
- Waste report: address all wastes generated by the process, including the fate of all waste products.
- Adherence to Health, Safety, and Environmental regulations.
- Community Relations and Public Involvement Plans. See *Team Success Guide*.
- Conclusions

4. Rights: The report should be non-proprietary and omit product trade names.

5. Audits: Teams are required to include three separate third-party audits as the end matter in the report:

1) ***Economics and Business Plan*** (Auditor should have deep knowledge of economics/business)
2) ***Health and Safety Issues*** (Auditor should have deep knowledge of EH & S issues)
3) ***Legal and Regulatory Issues*** (Auditor should have deep knowledge of legal/regulatory issues)

- The third-party engineering audit is an important part of risk management at an engineering firm and ensures compliance with local, regional, and national requirements and regulations. At the contest, it is especially helpful in the three areas listed above, in which teams tend to have limited experience. A good auditor will help identify weaknesses in your paper.
- Each audit should be no more than 2 pages in length and will not be counted toward your page count. The audit should be on the auditor's company letterhead, if possible.
- The audits should clearly indicate requests for improvements. If the team and auditor complete multiple rounds of revisions, attach each revision request to the technical report.

- Your team should address all auditor recommendations prior to submitting the final paper to WERC. Judges will evaluate how well your team followed the auditor's recommendations and addressed their concerns.
- If choosing not to implement a change suggested by an auditor, the team should include an addendum (separate sheet following the audit) outlining the justification for this decision.
- Working with your auditors:
    - Submit a rough final draft to auditors 3 weeks prior to the paper due date. Allow 2 weeks for auditor reviews and one week to implement their suggested changes.
    - Ask your auditors to evaluate only the specific aspect of your work they are assigned (one of the three above). Do not ask them to edit the entire paper.
- Selecting your auditors:
    - Judges look for high-quality auditors. Use third-party persons who are independent of the team's design planning and can provide unbiased assessments of the team's work.
    - Avoid faculty members from your university, but if they are truly the best choice to review your work, they may not be associated directly with the team or any of its research, planning, or implementation.
    - Suggested auditors: industrial representatives, lawyers, business owners, experts, doctoral students, alumni, etc.
    - Suggested auditors for the Economic Analysis: MBA students or the Small Business Development Center (SBDC) near you.

- See *Team Success Guide*-Audits for more about the audits.

Business Plan Checklist:

Required Economics Calculations for a robust business plan.

1. Capital cost CAPEX (including construction, instrumentation, plumbing, etc.)
2. Operating cost OPEX (to include raw materials, utilities, labor/maintenance)
3. Depreciation and MACRS taxes
4. Use of "economies/diseconomies of scale" concepts (typically requiring a determined production rate to optimize cash flow to address the question, "How much should we produce?")
5. Cash flow analysis (use of discount factors to account for the time value of money)
6. Profitability analysis (Net Present Value (NPV) analysis; Internal Rate of Return on Investment (IRR); Payback period)
7. Comparison of alternatives by capitalized cost methods OR an Economic Replacement Analysis (equivalent annual cost, EAC, based on a present worth analysis accounting for initial cost, O&M costs, salvage value, interest rate, and service life)
8. Visualization tools: Use tools such as sensitivity analyses, graphs, and other visuals to illustrate how key parameters impact system performance and economics.

III-B. Oral Presentation Specifications and Regulations

Regulations

1. ***Rubric:*** Contest Scoring for Task Events
2. ***Type size.*** Type on the slides should be readable from 30' away (no smaller than 28 points).
3. ***Slide requirements:*** Ensure that figures are readable and that colors have sufficient contrast to be viewed from this distance. Include citations at bottom of slides, as needed. Include team name at bottom of every slide.
4. ***Presenters:*** There is no limit to the number of team members who may present; However, a maximum of four is recommended. Judges will deduct points if having too many presenters causes confusion or disrupts the flow of the presentation.
5. ***Setup and breakdown time:*** Total of 5 minutes (2.5 minutes for setup and 2.5 for breakdown)
6. ***Presentation Time Limit:*** 15 minutes. Judges will not speak during the presentation.
7. ***Question/Answer period****:* 10 minutes following the presentation. The Team Leader (or the Leader's designee) will field questions from the judges and select the team member who is to answer the question.
8. ***Attendance:*** Competing teams are not allowed in the room, but other students from the participating school may attend. Avoid having the faculty advisor present, as it can hamper the students' presentations.
9. ***Point deductions****:* 10 points deducted: a) per minute over the presentation time limit, b) if a faculty advisor attempts to give a part of the presentation or answer judges' questions, c) too many presenters (based on judges' impression that the presentation did not run smoothly due to presenters being poorly organized).
10. ***Videotaping:*** Allowed if conducted unobtrusively. This can distract the presenters.

Logistics

1. ***Dress in business attire.***
2. ***Presentations - General:*** Multiple presentation rooms will be used at the same time. Teams working on the same project present their research back-to-back, most likely in the same room. The team will have the presentation loaded on their own computer. The computer will be plugged into the AV system at the venue. Please check with us at least three weeks in advance to ensure connection compatibility. HDMI is provided.
3. ***Presentation Logistics:*** 1) The team enters the room and sets up the slide deck. 2) The leader introduces the team members, including those not presenting. 3) The team gives the presentation, ending with conclusions. 4) The team leader asks the judges for questions. 5) The judges ask questions. When finished, they thank the team. 6) The team leaves the room, taking all equipment with them. 7) Judges make notes and enter scores prior to the next team entering the room.
4. ***Intended Audience:*** Judges who are acting as your client or plant manager. They evaluate the technical, logistical, and economic viability of your design, and may discuss modifications with you.
5. ***Goal:*** Convincing your client (the judges) that yours is the optimal solution for the task.

Pre-contest Preparation

1. April 2-4: Reserve a presentation rehearsal time for your assigned room. (Sign-up provided online).
2. Prepare a technical and professional discussion of your solution using essential elements of the tech report.
3. Use graphs, charts, and figures to illustrate trends and report findings.
4. Be concise. The judges have already read the report. Make the most important points.
5. Anticipate questions: The judges, like a manager or client, may identify a weak area in your presentation and probe it. If you do not know the answer, do not bluff. Promise to look it up and discuss it with them during the bench-scale discussions on the following day.

III-C. Poster Specifications and Regulations

1. ***Rubric:*** Contest Scoring for Task Events
2. ***Poster size:*** One poster board per team. Maximum allowed poster size: 36” x 48” (nominal: 35” x 47”). The poster may be either landscape or portrait orientation. WERC cannot provide any means of mounting a larger poster.
3. ***Poster content:*** The poster should tell the whole story without a team member being in attendance.
4. ***Poster Mounting:*** Upon arrival, teams mount their posters on mounting boards. WERC will provide:
    a. 35” x 47” aluminum mounting board with hanging grommets.
    b. Binder clips for temporarily attaching the poster to the mounting board.
    c. Chains for hanging posters from the booth’s pipe-and-drape frame.
5. ***Poster mobility.*** To maintain safety in the bench-scale area, posters must remain hung from the chains in demo booths. Monday afternoon, they will be moved to the banquet hall and displayed on pedestal stands for the Poster Session, then returned to the bench-scale area for Tuesday’s demos. Posters must remain hung on the chains while in the bench-scale demonstration area.
6. ***Transporting posters:*** Two team members will be needed for safe poster transport between rooms.
7. ***Cost limit:*** The cost for the preparation of poster displays should not exceed $250.

Poster Session

1. ***Dress:*** Business attire.
2. ***Scoring:*** Poster will be scored during the Monday afternoon Poster Session.
    a. Judges record preliminary poster scores during a 50-minute closed session during which they will view all posters.
    b. After the closed session, teams will enter the room and stand by their poster to answer questions.
3. ***Presentations:***
    a. Posters are presented to smaller groups of judges (2-3 at a time).
    b. Each presentation is 10 minutes per set of judges.
    c. Prepare a brief introduction to your poster and project, then allow the judges to ask questions.
    d. No more than 3 team members should attend the poster at one time, due to space constraints. Additional team members may observe from a distance and rotate in/out to maintain a comfortable grouping around the poster.

III-D. Bench-Scale Demonstration Specifications and Regulations

We take pride in our safety record. Do your part and keep it safe for all in attendance!

Safety

1. ***Pre-contest***
   a. When at your home lab, follow your institution's safety protocol for running all experiments.
   b. *February 20, 2026:* Deadline to attend WERC's Short Course, *Developing an Experimental Safety Plan (ESP)*.
   c. *March 13, 2026:* Deadline to submit the ESP (Required to run a bench scale experiment at the contest).
2. ***At the contest: Commissioning and Decommissioning***
   a. *Setup:* Begin setting up your team's equipment when you arrive on Sunday.
   b. *Safety Meeting:* Held on Sunday. Attendance is mandatory.
   c. *Commissioning April 12-13:*
      i. Teams are not allowed to run their bench-scale demonstration until they have been commissioned by the Safety Officer or one of her delegates.
      ii. Commissioning starts Sunday. Safety Staff will verify that your ESP matches your bench-scale setup. Upon approval, you will be commissioned to operate the equipment on Monday.
      iii. Chemicals needed to run the bench scale (if needed) will be issued Monday morning.
      iv. Beginning Monday morning, lab safety PPE is required at all times in the bench-scale area. This includes safety glasses, long pants, and closed-toed shoes. WERC will provide safety glasses.
   d. *Judge safety:* Provide judges with safety equipment, if needed. Sanitize safety equipment between judge visits. (Note: Judges consider your team's implementation of safety protocols in their scoring.)
   e. *Decommissioning:* Tuesday after bench-scale samples are submitted, teams dismantle equipment, clean their area, prepare waste for disposal and move to Waste Accumulation Point, and pass inspection.

Other Bench-scale Demonstration Regulations

4. *Rubrics:* The bench-scale demonstration is evaluated in the following two ways:
   - As a component of the Task award (Contest Scoring for Task Events)
   - For the Bench-scale Demonstration Award (Contest Scoring for Task Bench-scale Demos)

1. *The team's poster* will be displayed in the booth at all times except during the Poster Session. For safety, posters must hang from the pipe-and-drape in the booth. No posters will stand on easels at indoor booths.
2. *Running the bench-scale demonstration:* Refer to your task problem statement and your approved ESP for specifics. Otherwise, there are no regulations regarding the demonstrations.
5. *Team Presentation:* Prepare and rehearse a brief demonstration for the judges, incorporating the poster. Be prepared to run the experiment in their presence, though this may not be feasible for all judge visits.
6. *Unanswered questions* from the oral presentation should be addressed during this session.
7. *Judging*: You will present your results a minimum of three times for judges who come to your booth in smaller groups of 2-3 judges in three 30-minute shifts. Other teams and sponsors will likely visit your booth.
8. *Sample testing:* Conducted on Tuesday. The Task Problem Statement outlines how your bench-scale experiment will be tested. If required, WERC will hand you a pre-mixed solution and collect your final solution on Tuesday. The samples will be delivered to NMSU's analytical labs, and results will be reported to judges during the Wednesday awards deliberations.
9. *Team meets team:* Teams are allotted time to visit other teams' bench-scale demonstrations to explore how others approached the same problem or learn about other tasks. Teams vote for their favorite bench-scale design.

Bench-Scale Demonstration Resources

Teams must follow all safety regulations, as guided by the Experimental Safety Plan (ESP). See Part VI.

What is not available at the contest:

- Chemicals, except those specified by your Task
- Gas
- Fume hoods
- Electricity over 120 V
- Furnaces & Lab Ovens
- Pressurized water flow (e.g., hose-fed)

Chemicals that can be purchased at NMSU

NMSU's Main Stockroom (Andrea Coleman, Manager) has some chemicals available for purchase.

- Chemistry Stockroom: Chemistry-Biochemistry Building, Room 103.
- Call for availability, pricing, and current hours of operation:
  - Main Stockroom: Room 103, 575-646-4330
  - Organic Stockroom: Room W192, 575-646-2256
- Hours as of this printing (Mountain Time): M - Th 9 AM - 9 PM; Fri 9 AM - 5 PM
- Cash, check, or credit card accepted, but no card reader – write your CC # on a piece of paper.

WERC-provided Bench-scale Supplies and Equipment

WERC is able to provide the items below at the contest. Request these items in the ESP.

- Water
- Pipettes
- Lab Scale, balance
- Some hand tools
- Centrifuge & tubes
- Turbidity, pH, ORP meters
- Hand-operated water pumps
- easels, stands, brackets, clamps, and other similar items.
- Labware kit containing assorted-sized plastic beakers and graduated cylinders

Items that may be provided on a case-by-case basis (submit requests to mljgh@nmsu.edu)**:**

- Compressed air
- Gas regulators (we have a few and may be able to meet your needs)
- Kiddie pools for secondary containment
- Other – feel free to ask, but first see notes above "*What is not available at the Contest*."

Indoor vs. outdoor booths

- Teams will be assigned an indoor booth unless warranted by their project
- Outdoor booth assignments will be based on the need for wind, sunlight, ventilation, and similar needs.
- Teams with outdoor booths will also be assigned a smaller indoor booth to facilitate a sense of community among all teams. See chart on next page for description.
- The indoor booth is provided as a courtesy. The team does not need to use this area. Indicate in your ESP if you would like to be assigned an indoor area.

Bench-Scale Demonstration: Booth size, Equipment, Permit Process

Time/Day	Event	Description
Sunday 2-5 PM & 7:30 – 9:00 PM Bench-scale area closes promptly at 9:00 PM.	Bench-scale set-up	**Indoor Bench-scale Demonstration Booths:** WERC provides indoors: • 10' X 10' booth footprint, 8’ high pipe-and-drape on 3 sides • 110V electrical outlets • 8' folding table • 35” x 47” foam board for mounting poster, mounting clips, hook/chain assembly for hanging the poster in the booth. **Outdoor Bench-scale Demonstration Booths:** For demonstrating the prototype: • 10' X 10' booth footprint • 110V electrical outlets and/or electric generator connection • 8' folding table • 35” x 47” aluminum board for mounting poster, mounting clips, and pedestal stand for poster display. For an indoor landing place: • 6’ x 6'' booth footprint, 3’ high pipe-and-drape on 3 sides • The poster and stand must remain in the indoor area, except during official bench-scale demonstration times (weather permitting) See previous page for additional equipment/supplies that can be requested. Contact: Juanita Miller (miljgh@nmsu.edu)
Monday 8 AM	Bench-scale Area Opens	Safety glasses, long pants, and close-toed shoes are enforced at all times in the bench-scale area beginning Monday morning until decommissioning for all teams is complete on Tuesday.
	Sample distribution	As described in each task problem statement, synthetic solutions or other materials will be distributed following ESP commissioning.
Bench-scale area closes promptly at 8:00 PM.	Running the bench scale	Teams may run their bench-scale apparatus throughout the day. Your ESP will determine how to address your equipment after the bench-scale area closes for the evening.
Tuesday 8 AM	Sample Evaluation	Samples will be taken as outlined in the task statement. Samples will be evaluated using analytical equipment located on the NMSU campus or onsite at the contest. A secondary independent lab may be used to confirm first-place results. Team results sample due by 2:00 PM on Tuesday.
4 PM	Bench-scale Area Closes for this Contest	All equipment must be packed and removed, the booth area cleaned, and waste disposed of, as described in the decommissioning instructions.

PART IV. TASK EVALUATION CRITERIA—RUBRICS

Task prizes and overall contest special prizes are based on the teams' scores in the four main contest events:

1. Written report
2. Formal oral presentation
3. Demonstration of your technology using a bench-scale representation
4. Poster presentation

(*See Awards. The Flash Pitch Competition is a separate event judged by a separate set of judges*.)

Task Rubric Weighting

- 70% of your team's score will be based on the overall technical aspects, EHS, and community outreach.
- 30% of your team's score is based on your team's effectiveness in communicating your solutions during each main contest event.

Judges will evaluate your team's response to the problem statement, including:

- Thoroughness of the process-flow diagram (or similar schematics outlining your design)
- Originality and innovation represented by the proposed technology.
- Depth and quality of the technical analysis.
- Thoroughness and quality of the economic analysis.
- Quality and impact of the community engagement plan
- The effectiveness of your bench-scale demonstration in demonstrating your team's solution and how it integrates into the chosen landscape and community.
- Potential for real-life implementation (ease of operation and maintenance, affordability, etc.).
- Other specific evaluation criteria specific to your selected task.

Contest Scoring – Bench-scale Demonstration Competition

Each item holds equal weight in scoring

A. Apparatus solves the problem outlined in the task.

B. Apparatus demonstrates all steps required in the task problem statement.

C. Analytical results at the contest validate claims made in reports and presentations.

D. Originality and craftsmanship of the apparatus are exceptional.

E. Apparatus is efficient, simple, and easy to use.

F. Apparatus is reliable and robust.

G. Apparatus is safely operated at all times.

H. Design promotes environmental sustainability and/or minimizes waste.

I. Team's proposals for improvements or next steps in their technology exhibit good engineering judgement.

J. Quality of answers to judges' questions, including answers to the previous day's questions.

K. Team effectively refers to the poster when needed, and the poster contained the graphs/data needed to support the bench-scale demo.

L. Team presentation of the bench-scale apparatus was a well-organized group effort. Each team member was prepared to present specific aspects.

Contest Scoring for Task Events

- Items I through III are assessed across multiple events (report, orals, poster, bench). Judges will continue to update your score in these areas as the contest progresses.
- Items in IV are event-specific evaluations of team communication (for report, orals, bench, & poster).

Percent of Final Score

40% **I. Technical Content** (Written report, Oral presentation, Poster, Bench demonstration)

A. Background Research

B. Consideration of alternative technologies, justification for technology chosen, and discussion of situations in which alternative technologies may be preferable to your team's design

C. Innovativeness of chosen technology

D. Design thoroughness (mass & energy balances; process flow diagrams; waste stream management)

E. Quality, thoroughness, and reasonable results of Techno-Economic Analysis and addressing costs of alternatives.

F. Design practicality (cost-effectiveness; attainable with current technology, likelihood of implementation)

G. Lab results validate claims

H. Do you recommend that this paper be submitted for consideration in WERC's IEEE Proceedings?

20% **II. Environment, Health, Safety** (Written report, Oral presentation, Poster, Bench demonstration)

A. Local environmental health and safety

a. Safety considerations are appropriate and included in plans for construction and operation.

b. Governmental regulations at all levels (federal, state, local) are accounted for and are appropriately applied to the project

c. Reasonableness (i.e., do not require a hard hat when there are no head trauma hazards)

B. Natural environment

a. Waste stream management

b. Relevant agencies and permitting accounted for

c. Long-term sustainability

10% **III. Community Outreach** (judging primarily focused on Written report & Oral presentation)

A. Effect on local area (quality of life; property values; pollution treatment or prevention)

B. Community Relations Plan: Plan and schedule for communication with the local population to address perceptions. (i.e., overcoming the perception that direct potable reuse is drinking toilet water.)

C. Public Involvement Plan (Community Acceptance Plan). Plans for engaging stakeholders in decision-making are sound.

D. Community outreach: Did the team post on social media recognizing the sponsor and WERC? (Judges will ask the team to show a social media post during the Bench-scale demonstration).

IV. Effectiveness of Team Communication (30% Total)

5% **A. Quality of Technical Report**

1. Professional tone, proper grammar and spelling.
2. Organization (section flow, clearly marked sections, page numbers included in Table of Contents)
3. Executive summary covers important points and omits non-essential information
4. Appropriate balance between background research and the final design discussion
5. Effective use of figures and tables (figures & tables aid communication; all text & graphics are readable)
6. Other Notes Judges will make:
   a) Did the team include a "Pollution Prevention" section for P2 Award consideration? (No points)
   b) How many days late was the report (if any)? Late reports are penalized by 25 points per day.

5% **B. Process Flow Diagram (Written report, Oral Presentation, Poster Presentation)**

Thorough and accurate diagrams that outline the process flow that may include a PFD; system schematics; other diagrams (instrumentation, control system, power flow, or circuit); computer architectures, etc.

5% **C. Audits (written report)**

1. Three audits are included (Economics, Health & Safety, Legal)
2. Auditor credentials included (appropriate to the audit topic)
3. Auditor objectivity (should be far-removed from project development)
4. Team implemented auditor comments, as appropriate

5% **D. Quality of Oral Presentation**

1. Slides are free of spelling and other errors.
2. Slide design (appropriate amount and types of content on each slide; readability from the audience)
3. Presentation: Well-planned, smooth topic flow, appropriate number of slides, properly paced.
4. Delivery (easy to hear and understand; talked to audience - not the floor; etc., not rushed).
5. Appropriateness of attire (Team Manual specifies business attire).
6. Quality of answers to judges' questions.
7. Subtract 10 points for each minute over time or if confusion was caused by having too many presenters.
8. Subtract 10 points if faculty advisor speaks once the presentation begins.

5% **F. Quality of Poster**

1. Poster attracted the judge to read it.
2. Important points and figures can be read from a distance of two feet.
3. Poster is free of misspellings, grammatical errors, and similar issues.
4. Poster has no large blocks of text, sufficient white space, and easy-to-follow flow.
5. Sufficient graphics to tell the story without extra words (graphs, tables, photos).
6. Poster can stand on its own to convey information without requiring the other events (report, slides, or bench demo)

5% **E. Quality of Bench-Scale Presentation**

1. Apparatus demonstrates proposed technology and works as intended.
2. Apparatus is safely operated at all times.
3. Team clearly explains how proposed technology works.
4. Team incorporates poster when appropriate for needed information.
5. Teams appropriately addressed questions outstanding from oral presentation (if applicable).
6. Entire team is knowledgeable, and all team members participate in the discussion.
7. Quality of answers to judges' questions about the bench-scale demonstration.

Part V. FLASH PITCH SPECIFICATIONS AND REGULATIONS

Regulations

1. ***Presentation time limit:*** 3.5 minutes.

2. ***Team identification; Sponsor acknowledgement.***
   a. Identify your team by number, university, and a memorable fictitious (or real) company name.
   b. Acknowledge your WERC Task sponsor(s) as well as any other Team sponsors (either in opening slides, closing slides, or incorporated as part of your business model).

3. ***Slide Format:***
   a. Aspect ratio: 16:9
   b. PDF format (for reliability). Contact werc@nmsu.edu to arrange an alternate format, if needed.
   c. Type: Minimum of 28-point type for body, 36-40 for headings. Figures viewable from 60' away.
   d. Team name on bottom of every slide (point size for this may be smaller than 28 points).

4. ***Slide Content***
   a. Cover Slide: Project title, presenter(s), names of all team members, team info, sponsors.
   b. Additional slides (No more than 6. Organize in any order). Topics to cover (mirrors the rubric):
      - Product description and why the client needs it.
      - Business strategy: Plans for selling product and generating revenue.
      - Profitability & Market Share: estimation of industry worth, marketing conditions, market share, marketing strategies, timeline to profitability, future business sustainability.
      - Startup Funds needed and funding source(s)
      - Competitive advantage: product uniqueness and your strengths (patents, IP, etc.)
      - At the same location on every slide: place anonymous team name and brief project title.
   c. Simple animations or videos (no longer than 1 minute) may be included.

5. ***Timers:*** On-screen timers will be superimposed on each presentation. The clock will signal the end of the 3.5-minute period. Point deduction for exceeding the time limit.

Flash Pitch Logistics

1. ***Rubric:*** See next page.
2. ***Slides will be pre-loaded*** on WERC's laptops when you arrive on Sunday.
3. ***Summary Submission:*** Due 11:59 PM Monday, April 6, 2026. See WERC Forms for Summary Template
4. ***Slide Submission:*** Due 11:59 PM Monday, April 6, 2026. Upload Flash Pitch slides to the Team Site (Watch for submission details).
5. ***Slide Deck Check: Noon – 4p Sunday:*** Prior to your arrival, sign up to preview your slides prior to the Flash Pitch.
6. ***Dress in Business Attire.***
7. ***Intended Audience & Goal:*** Business investors (Flash Pitch judges) or an engineering firm. Convince them to invest in your company.
8. ***Slideshow operation:*** Provide a teammate to advance the slides.
9. ***Presentation setup:*** The screen is similar to standing height. There will be no podium to encourage audience engagement. Though not strictly necessary, you may bring a laser pointer.
10. ***Sunday: Flash Pitch Presentation, Round 1:***
    a. Teams will be divided into 2-3 rooms and will present simultaneously in their assigned room.
    b. All team members, whether presenting or not, should stand and be acknowledged at the start of the presentation. (Practice!)
    c. Timing:
        i. The presenting team sets up their slide deck while the next team gets "on deck."
        ii. 3.5-minute presentation
        iii. 2 minutes for Q & A
        iv. 2 minutes for scoring (while the next team gets on deck).
11. ***Monday: Final Round teams announced.*** They will draw to determine presentation order.
12. ***Tuesday: Flash Pitch Presentation, Final Round:***
    a. Presentations held in front of all teams from the center stage of Ventanas Ballrooms.
    b. Judged by a fresh set of three judges who have not previously seen any presentations.
    c. The team may add 0.5 minutes of content, if desired.
    d. Timing:
        i. The presenting team sets up their slide deck while the next team gets "on deck."
        ii. 4-minute presentation
        iii. 10 +/- minutes for Q & A
        iv. 2 minutes for scoring (while the next team gets on deck).
13. ***Winners:*** Winners announced at the Wednesday Awards Banquet.

WERC FLASH PITCH COMPETITION RUBRIC

Team #	Comments Comments will be shared with teams.	Points (0 – 10)
Clearly defined product/service and need - Product/service clearly presented - Market need for product is evident and quantified		
Originality Solution is innovative. It advances or transforms current technologies, processes, or markets		
Technical Feasibility - Engineering principles are sound - Realistic path to full-scale implementation - Addresses technical limitations and risks		
Business and Marketing Strategy - Well-defined customer base and outreach strategy - Clear & plausible path for bringing solution to market		
Profitability, Market Share, Financial Feasibility - Realistic understanding of industry and market size - Clear timeline to revenue and long-term viability - Awareness of time and scale required for financial sustainability		
Competitive Advantage A defensible market position is proposed that is ▪ difficult for competitors to replicate. ▪ likely to be sustained over time.		
Recommendation Would you recommend this product/service, and its team, for further development or funding consideration?		
Audience Engagement – Wow Factor -Confident, fluid, professional -Motivating/enthusiastic		
Content Preparation -Organized and informative presentation -Slides are clear, attractive, and error-free -Understandable to a non-technical audience		
Q & A: Ability to answer questions - Responds with clarity and insight - Poised and professional		
Point Total		

PART VI. WERC EXPERIMENT SAFETY PLAN POLICIES (ESP)

Overview

Pre-Contest: Follow your school's safety procedures while conducting tests prior to attending the contest. The WERC ESP is only for running your bench demonstration at the contest in Las Cruces. Do not list items in your WERC ESP that you use at your home university, unless you are also bringing them to the contest.

Contest: Teams will not be able to run a bench-scale demonstration at the contest if the ESP is not received by the deadline. To prepare to submit the ESP, every member of your team is required to complete the on-demand course, Preparing the Experimental Safety Plan, on or before February 20, 2026. You will be emailed a link to access the ESP short course after your team registers for the contest.

Minimum ESP Requirements for WERC:

An Experiment Safety Plan (ESP) is required for every bench-scale experiment conducted at the WERC Environmental Design Contest. The ESP ensures the safety of all by identifying the safest possible methods to conduct an experiment. All ESPs will be approved by the NMSU College of Engineering Safety Specialist (COE Safety) and NMSU's Environmental Health, Safety, and Risk Management staff (EH&S).

By signing the ESP, the team, their faculty advisor, and COE Safety acknowledge responsibility for the following.

1) No researcher is permitted to work alone in a lab or at the contest at any time, for safety reasons.

2) Appropriate Personal Protective Equipment (PPE), as described in the team's ESP, must be worn in your bench-scale demonstration area at all times on Monday and Tuesday.

a) This regulation is in effect from the time that the first team is commissioned to run their experiment (Monday morning) until the last team is decommissioned (Tuesday afternoon).

b) The minimum required PPE required to enter the bench-scale area is listed below. (Additional PPE is dictated by your ESP.)

i. Long pants
ii. Closed-toe shoes
iii. Safety glasses (provided at the contest)

3) Two-phase ESP approval:

a. *Phase I* – Written safety plan to: establish controls of hazardous operations, avoid the purchase of inappropriate supplies, and establish expected waste streams. Online approval of the written plan by COE staff and NMSU EH&S is permission for the team to bring their experiment, equipment, and necessary chemicals to the contest.

b. *Phase II* – Approval on-site at the event: Requires evaluation of the assembled experiment and a dry run of the experimental procedure. Upon approval, the team will be "commissioned" and may begin operating their bench-scale equipment and devices.

Experiment Safety Plan (ESP) Instructions

The eight required submissions for the online ESP are listed below and described on the following two pages.

1. Experimental Scope
2. Drawing of Experimental Layout including P&ID
3. Normal Operation, Startup, and Shut-down Procedures
4. Emergency Shutdown Procedures
5. Waste Management Procedure
6. Hazard Identification and Mitigation
7. Other Equipment Needs
8. Safety Data Sheets

1. Experimental Scope

1. Explain why the work is being performed and the goal(s) of the experimental design. If this is an update/revision of a previous ESP, describe all changes
2. Include a complete list of all chemicals (reactants and products) involved in the work.
3. Include a complete list of all equipment (e.g., autoclave, centrifuge, pump, heat bath, etc.) to be used.
4. Provide the stoichiometry of any chemical reactions and their heats of reaction.
5. Demonstrate the inherent thermal safety of your experiment, if warranted, through calculation or through the use of accelerating-rate calorimetry data.
6. Include a timeline for the experiment, including setup, sample runtime(s), and teardown. Experiments that must run after hours require special approval; teams must explain why the after-hours run is necessary, how it will be managed (i.e., will the equipment operate autonomously, be monitored remotely, or require onsite supervision?), the duration of monitoring required, and other relevant information.

2. Experimental Layout, Piping and Instrumentation Diagrams (P&IDs), etc.

Provide a detailed drawing of the bench-scale setup. It must be drawn to scale with dimensions included. If warranted, submit P&IDs that show all inputs and outputs for each piece of equipment and system.

3. Normal Operation, Startup, and Shut-down Procedures

Provide a **step-wise** procedure that describes **in detail** how the work will be performed.

1. Begin and end the procedure with the equipment in the normal idle (inoperative) state.
2. Include a statement of the required PPE, starting at the beginning of the procedure and at every location in the procedure if the PPE requirements change during the process.
3. Include details of how your apparatus will operate (e.g., run time, run rate, sample rate, etc.)
4. Indicate where hazardous feedstock chemicals will be stored, how they will be transported to the location of the experimental work, how they will be transferred from the storage vial into the experimental apparatus, and how they will be returned to storage.
5. Address hazards identified as “yes” on the WERC Lab Hazard Assessment Checklist (Website: ESP Forms).

4. Emergency Shutdown Procedures

1. Provide a step-wise procedure describing how the equipment will be brought to a safe state in the event of an emergency. Consider emergency situations such as power loss, leaks, or fires in your equipment or the surrounding lab area.
2. Include a detailed explanation of how to attend to potential medical emergencies that may result.

5. Waste Management Procedure

Prepare a Waste Management Procedure that indicates the exact nature and estimated volumes of all wastes to be generated during the experiments. NMSU will provide containers and forms for the proper disposal of materials. NMSU will dispose of on-site waste when placed in proper containers.

6. Hazard Identification and Mitigation

Identify and discuss all HIGH hazards associated with the experiment. Use WERC's online Lab Hazard Checklist. When in doubt about whether something represents a HIGH HAZARD, ask COE Safety for a determination.

The Hazard Identification and Mitigation analysis must consider:

1. all sources of energy (electric, chemical, hydraulic, mechanical, compressed gases);
2. extreme conditions of pressure or temperature (from flame or steam to cryogenics);
3. chemical use and storage;
4. housekeeping;
5. fire potential;
6. biological hazards.

The discussion must include:

1. Description of the HIGH hazard;
2. Operational and engineering controls that will be used (based on identified industry best practices used in addressing this safety hazard);
3. Required PPE (beyond minimum) when this HIGH hazard is present; and
4. Special training (beyond minimum) that is necessary.

7. Other Equipment Needs:

Provide a list and details of any equipment you require that cannot be shipped to the event. We have several items available for use and can lend them to your team, but please notify us in advance.

Examples include scales, balances, electrical test meters, hand tools, secondary containment vessels (e.g., a kiddie wading pool for water containment), easels, stands, brackets, clamps, and other similar items.

8. Safety Data Sheets

Provide SDS documents for all chemicals used at the event, including household and consumer products.

PART VII. 30% PROJECT REVIEW REQUIREMENTS

Every team is required to submit a 30% Project Review. The 30% Project Review Form is posted online.

Audience: A potential client.

Submission date: January 1–30, 2026. Submit as early as possible for timely feedback. Date extension can be arranged for teams that begin their project in the Spring semester.

Project modifications: You are allowed to make changes to your plans after submitting the Review.

Assessments: Although the review is not scored, your team will receive feedback from the judges on how to improve your project. The higher the quality of your Project Review, the more help you will get from the judges.

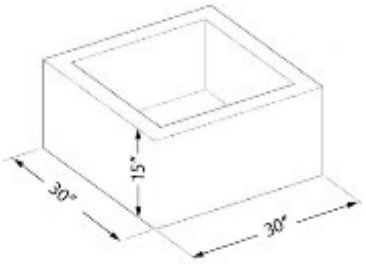
Submission Requirements:

1. Team Information Name, University, Team Leader, Task number, Project Title
2. Bulleted list outlining the top five Task design requirements and how your design maps to each requirement.
3. Complete Process Flow Diagrams (PFD) or other process system diagrams showing balanced inputs and outputs. Include all diagrams that outline the system flow, such as PFDs, system schematics, computer architectures, and diagrams that illustrate instrumentation, control systems, power flow, circuits, etc.
4. Preliminary data and/or calculations that support the proposed design. This might include expected chemical reactions (reactants, reaction times, etc.), flow volumes and rates, and other relevant details.
5. A rough estimate of scale-up project costs. This will provide your client with an opportunity to assess the feasibility of your design. (Based on your design and estimated costs, perhaps they would want to suggest modifications for inclusion in the final design.)
6. Bulleted list outlining planned bench-scale demonstration analytical testing processes. These may include sample collection, data collection, and reporting, as warranted by your project.
7. 3-D drawing of your planned bench-scale demonstration system (*only if required in your Task Problem Statement*)
    a. In lieu of a 3-D drawing, you may submit three views: top, front, and side.
    b. The system must fit within the prescribed booth space (10’ x 10’) and an 8’ banquet table.
    c. Plans must be drawn to scale with dimensions labeled.
    d. Drawings that WERC cannot easily interpret will be returned to the team for revisions.
    e. You are allowed to change plans after submitting the 30% Review. If plans change, submit updated plans to werc@nmsu.edu.
    f. The contest venue is a banquet facility without typical lab resources (e.g., no fume hoods, ovens, etc.). WERC provides your team with an 8 folding table and access to 120V power.

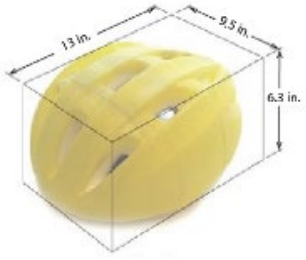
3-D Drawings

If your Task requires 3D drawings in the 30% Project Review, the 3D drafts may be simple AutoCAD (or other) drawings that outline the outer dimensions of the bench-scale setup.

1. Use English units (it helps us envision your project on our 30” x 96” tables).
2. We only need the outer dimensions of each piece of equipment, as shown in Examples 1 and 2, below.



Example 1. Only outer dimensions are needed.
From Aslani et. al. DOI: 1-.3390/jmmp4020047



Example 2. Only outer dimensions are needed.
From Novak et. al. DOI: 10.1177/1754337118822613