



2024 Midwest Student Design Competition

COMPETITION GUIDELINES

INTRODUCTION: The [Central States Water and Environment Association](#) (CSWEA) Midwest Student Design Competition (MSDC) is intended to promote real world and hands on design experience for students interested in pursuing an education or career in the water/wastewater engineering and science fields. This year, the 5th Annual MSDC will be held on **Monday, April 8, 2024** in Madison, Wisconsin at the Monona Terrace Convention Center. This competition provides a unique opportunity for students at the college level to demonstrate their science, technical, and/or engineering skills and practices by researching and preparing a design for a water quality-based project and presenting their project to water industry professionals.

There are three (3) categories available for student teams to compete at the MSDC:

- WEF Wastewater Category
- WEF Water Environment Category
- GWS Category – “Global Water Stewardship – Horquetas, Costa Rica”

WEF Categories: The [Water Environment Federation](#) (WEF) categories at the MSDC are intended to feed into the national WEF student design competition at the WEFTEC conference on October 6, 2024 in New Orleans, Louisiana. **There are two WEF categories;** a conventional Wastewater Design Category which includes traditional wastewater design projects and a Water Environment Design Category which includes contemporary engineering design topics related to stormwater management, green infrastructure, low impact development, water reuse, wetland construction, distributed treatment systems, groundwater treatment, and other related topics.

**** Each student team must supply their own project or request one if competing in either of the WEF categories. WEF projects may be available for student selection if requested. A project problem statement (not to exceed 200 words) shall be provided on the student team entry form. The scope and extent of the project should be consistent with the level of a capstone course or graduate engineering/science student design course.*

Global Water Stewardship Category: The [Global Water Stewardship](#) (GWS) Category requires student teams to design a centralized wastewater treatment facility and collection system for a Costa Rican community that has been chosen as a partner community by the Global Water Stewardship NGO. This year’s problem statement is titled “Global Water Stewardship: Horquetas, Costa Rica”.

**** GWS will provide all teams with a problem statement including all design requirements.*

[SHARED FOLDER FOR GLOBAL WATER STEWARDSHIP PROBLEM STATEMENT AND ACCOMPANYING DOCUMENTS HERE.](#)

WORKLOAD: All projects shall include a problem statement, a development of alternatives, and a recommended solution. The depth of the effort should be comparable to preliminary design. A key criterion in the judging of the competition is the manner and level of effort spent in evaluating the alternatives, usually presented in the form of a decision matrix. Students may use whatever references or resources they choose to find a solution to their problem.

REQUIREMENTS: Student teams may consist of more than four (4) members, but only four (4) students may present at the competition. Students are allowed to compete alone without a team. Student teams will compete through oral presentations, in PowerPoint (slide deck) format. Each presentation will be 15 minutes followed by a 10-minute question and answer period. ***A design report is NOT required for the MSDC.*** Although your university curriculum may require submission of a design report as part of a capstone or senior design course, the only requirement for the MSDC is the presentation and Q&A participation as these are the only items that are used for competition scoring.

TIMELINE: **February 6, 2024 @ 5pm CST:** Informational webinar to review MSDC guidelines and answer any questions from students or faculty. Webinar will be recorded for anyone who cannot attend.

March 1, 2024: Submittal of the Entry Form for the 2022 Student Design Competition is due. Submit to Joe Lapastora at lapastora@nmwrd.org or Christine Hengel-Prom at hengelpromc@bv.com.

April 8, 2024: CSWEA Midwest Student Design Competition will be held in Madison, Wisconsin at the Monona Terrace Event Center.

SCORING: Judges from the water/wastewater industry will score the designs based on 15-minute presentations and 10-minute Q&A sessions. The category winners will be announced on the day of the competition.

AWARDS:

WEF Competition Categories: The winning teams from each WEF category will receive a stipend to compete at the WEFTEC student design competition scheduled for October 6, 2024, in New Orleans, Louisiana. Stipends for travel and lodging expenses to New Orleans may vary depending on the student team's respective WEF Member Association (MA). The winning teams will also have their designs featured in a future Central States Water Magazine issue.

Prizes for the winning teams at the national WEFTEC competition vary from year to year. Monetary awards provided by WEF for the top 4 design teams of each category are typically as follows: 1st place \$2,500, 2nd place \$1,500, 3rd place \$1,000, 4th place \$750.

Global Water Stewardship Category: The winning team from the Global Water Stewardship category will receive a travel and lodging stipend of up to \$1,000/student, for up to four students, to accompany GWS members on an upcoming GWS service trip to Costa Rica.

CAREER FAIR: A career fair will be held on the day of the design competition for any students who are interested in making connections with reputable engineering firms and vendors across the Midwest. The career fair typically occurs after all presentations are completed while students wait for judges to determine the category winners.

ARRANGEMENTS: Many teams may wish to stay overnight the night before or after the competition. CSWEA shall provide a stipend in the amount of \$500 per team for lodging and travel expenses to assist student teams from Illinois, Wisconsin, and Minnesota universities to present at the Midwest Student Design Competition in April. Funding may also be provided to student teams who fall outside of the States listed above, pending discussions between CSWEA, student teams, and their respective WEF Member Association. Teams are asked to manage their own budgets and provide receipts for reimbursement.

FOR ADDITIONAL INFORMATION, CONTACT:

Joe Lapastora & Christine Hengel-Prom
CSWEA Midwest Student Design Competition (MSDC) Co-Chairs
lapastora@nmwrd.org and hengelpromc@bv.com.