



2022 Student Design Competition

COMPETITION GUIDELINES

INTRODUCTION: The Midwest Student Design Competition is intended to promote “real world and hands on” design experience for students interested in pursuing an education and/or career in water/wastewater engineering and sciences field. This year, the Midwest Student Design Competition will be on **Monday, April 11, 2022** in Madison, Wisconsin at the Monona Terrace Convention Center. This is a unique opportunity for students at the college level to demonstrate their science and 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 categories of Student Design Competitions available for students:

- WEF Wastewater Design
- WEF Water Environment Design
- Global Water Stewardship

WEF Student Design Competition: The Water Environment Federation (WEF) categories at the Midwest Student Design Competition, feed into the national WEF competition at the WEFTEC conference on October 9, 2022 in New Orleans, Louisiana. The WEF competition requires teams of students to design and present a program meeting the requirements of a problem statement, developed by the students. **There are two levels of competition**; a conventional Wastewater Design category which includes traditional wastewater design projects and a Water Environment Design category which would include 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

The WEF Student Design Competition categories are designed to be a function of the WEF Student Chapters program however being part of a WEF Student Chapter is not required to compete at the Midwest Student Design Competition. However, the winning teams will have to ultimately be WEF student members to participate in the national WEF competition at the WEFTEC conference. Member Association will provide funding to the winning team to register up to four (4) students as WEF student members. Note that funding amount will vary based on which Member Association a team represents.

Global Water Stewardship Student Design Competition: The Global Water Stewardship (GWS) category at the Midwest Student Design Competition requires teams of students to design and present a project meeting the requirements of the real-life problem statement for the community of Montezuma, Costa Rica titled “Global Water Stewardship: Montezuma, Costa Rica”. Winning teams will receive a stipend of up to \$1,000/student, for up to four students, for travel and lodging expenses to accompany GWS representatives on a future August fact-finding trip to Costa Rica and to present their project to local community representatives.

WORKLOAD: All projects should 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 are expected to work with little assistance from an advisor and/or professor, and the students are expected to work together as a team to find a solution to their problem. Students may use whatever references or resources they choose.

REQUIREMENTS: Teams may consist of more than four (4) members, but only four (4) students may present at the competition. Student teams will compete through oral presentations, in PowerPoint format. Each presentation will be 20 minutes followed by a 10-minute question and answer period.

The winning teams of the WEF competition categories will be required to submit a design notebook complying with the WEF competition requirements set forth in the WEF design competition entry guidelines.

TIMELINE: March 1, 2022: Submittal of the Entry Form for the 2022 Student Design Competition is due. Submit to Joe Lapastora at lapastora@nmwrd.org.

April 11, 2022: CSWEA Midwest Student Design Competition will be held in Madison, Wisconsin at the Monona Terrace.

SELECTION: Representatives from wastewater industry will judge the design competition. The results of the competition will be issued to participants at the conclusion of the competition.

AWARDS:

WEF Competition Categories: The winning teams (max. of 4 members) from each category of the WEF categories will receive free registration from WEF to the WEFTEC conference in New Orleans, Louisiana (October 8 – 12, 2022). Stipends for travel and lodging expenses to New Orleans vary depending on the student's respective WEF Member Association (MA).

Prizes for the winning team at the national WEFTEC conference will vary depending on sponsorship opportunities. Monetary awards typically provided by WEF for the top 4 design teams are: 1st place \$2,500, 2nd place \$1,500, 3rd place \$1,000, 4th place \$750.

Global Water Stewardship Category: The winning team (max. of 4 members) from the Global Water Stewardship category will receive a travel and lodging stipend of up to \$1,000/student, for up to four students, (which is typically sufficient to cover travel and lodging) to accompany the next GWS team trip to Costa Rica for site analysis and investigations.

ARRANGEMENTS: Many teams may wish to stay overnight the night before or after the competition. Each team that competes in the MSDC will be reimbursed up to \$500.00 to cover travel and lodging expenses. Teams are asked to manage their own budgets and provide receipts for reimbursement. If teams need assistance in making arrangements, please contact Joe Lapastora at the below email address.

FOR ADDITIONAL INFORMATION, CONTACT:

Joe Lapastora
CSWEA Midwest Student Design Competition Chair
Email: lapastora@nmwrd.org