



ENTRY GUIDELINES

Revised December 2022

INTRODUCTION

The WEF® Student Design Competition (SDC) is intended to promote “real world” design experience for students interested in pursuing an education and/or career in the water and wastewater fields. Students with interest in protecting public health and the environment through use of the sciences, engineering, or other degree programs are encouraged to participate. This competition tasks individuals or teams of student members within WEF® to demonstrate their ability to evaluate alternatives, develop a comprehensive design, and present a solution that meets the requirements of a socially relevant problem statement.

For more information, contact:

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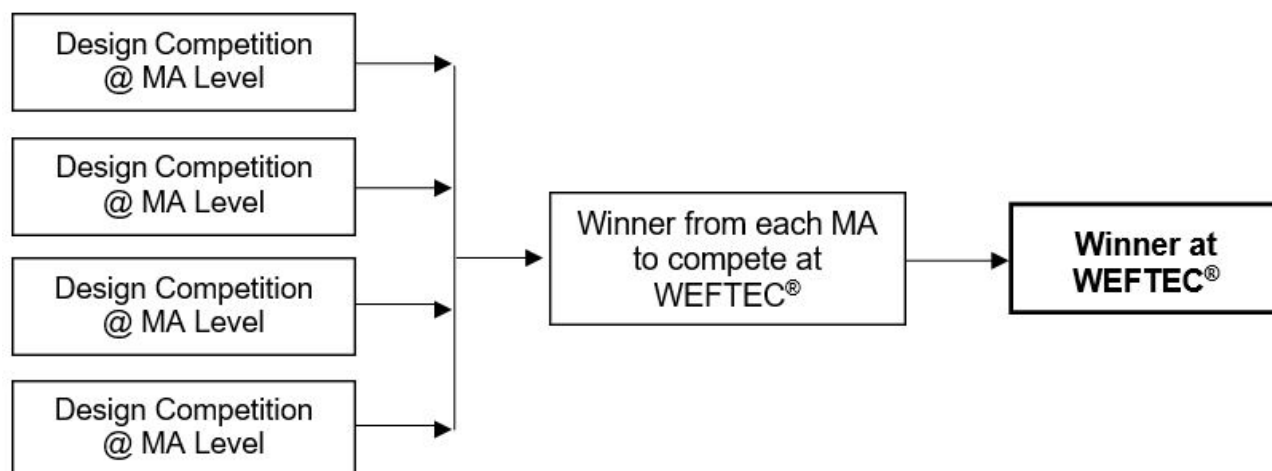
The WEF® Students & Young Professionals Committee (SYPC), of which the SDC subcommittee is a part, is always looking for interested persons to help further the activities supported by the committee. If you are interested in becoming a member and helping on one of the SYPC subcommittees, please contact Brad Lovett.

BACKGROUND

The original SDC concept was based on a student competition held within the Florida Water Environment Association. The competition was then expanded to the national level, and more recently, the international level, and is organized by the WEF® SYPC. A WEF® SDC Subcommittee within the SYPC was formed to lead the effort in establishing the WEF® SDC to be held annually at WEFTEC. The WEF® competition is intended to be the culmination of various member association (MA) level competitions (typically at the state or regional level), where student groups who have won their MA's competition will compete at WEFTEC. 2022 marked the 21st annual WEFTEC competition.

INTENT OF THE SDC

The competition promotes interests and skills that will prove to be extremely valuable as students enter the professional world. It is the intent of the WEF® SDC Subcommittee is to foster and promote this competition at the MA level as well as internationally. These guidelines represent a general guide to what the WEF® SDC Subcommittee envisions; however, not every MA or student group will be able to follow these steps directly. Below is a schematic of the intent of this competition.



Each MA will choose a design problem for its competition(s) and distribute the problem(s) to participating schools within the MA. Alternatively, MAs may allow each team to choose an individual design problem that meets the guidelines set forth herein. Typically, students will be given a period of time equivalent to one semester to conduct their alternatives analysis and finalize their design with the appropriate recommendations. At the discretion of the MA, teams may be given up to a full school year to develop their design report. If more than one team or student group participates, student teams will present their designs during a SDC held at the MA level. The winner of each MA competition, as determined by members of the MA, will be invited to compete in the WEF® SDC held in person at WEFTEC later that year. Furthermore, it is at the discretion of each MA to adopt and/or change the rules of these guidelines at the regional/MA level as needed to suit the MA to have a successful competition. All MAs are welcome and encouraged to participate.

If there is only one participating student team within the MA, that student team may compete at WEFTEC, assuming they meet the guidelines set forth herein and have received approval from their MA to be their representative at the WEF® SDC. Ultimately, participation of such teams is left to the discretion of the WEF® SDC Subcommittee. **All teams must have the support of their MA to participate in the WEF® SDC.** The WEF® SDC Subcommittee reserves the final right to accept or refuse a team from the WEFTEC competition.

Due to the rapid growth of the WEF® SDC in recent years, there will be a maximum occupancy of 34 teams allowed to compete at WEFTEC. At a minimum, the WEF® SDC Subcommittee will allow the participation of one team from each MA, provided said team meets the standards described herein. However, each MA is granted permission to register one team to compete in each competition category, for a total of two teams from each MA. In the event that more than 34 teams apply to compete in the WEF® SDC, the WEF® SDC Subcommittee will contact MAs after the abstract review process has been completed to convey their decision on which team shall be admitted to the WEFTEC competition. The WEF® SDC Subcommittee reserves the right to accept or refuse a team from the WEFTEC competition. All MAs are welcome and encouraged to send teams to WEFTEC.

All teams accepted will be expected to participate in the WEFTEC in-person competition. The WEF® SDC Subcommittee understands that due to COVID-19 or other travel restrictions, some teams may be unable to attend WEFTEC in-person. In this case, the WEF® SDC Subcommittee may grant an exception for a team to participate virtually. These decisions will be made on a case-by-case basis.

FORMAT OF THE SDC

The WEF® SDC is based on problems relating to protection of the circular water economy including sewer and pump station design, water/wastewater treatment plant expansions/upgrades, biological treatment, reuse, constructed wetlands, sustainability efforts, stormwater management, and other related topics.

The WEF® SDC hosts two separate competitions at WEFTEC, a Wastewater Design Competition and a Water Environment Design Competition. Students will need to specify in their application which group they believe their project falls into. **The final grouping of each Competition (Wastewater and Water Environment) and changes to the competition categories is at the discretion of the SDC Subcommittee and will be determined upon review of the application materials.**

The application includes both an abstract and either an executive summary or in-progress report. An in-progress report does not need to be fully complete and will not be taken into consideration for final project scoring. However, it should include sufficient detail for the WEF® SDC Subcommittee to determine the scope of the project and whether it meets the criteria set forth herein. Additionally, due to logistical constraints and the continued growth of the WEF® SDC, the WEF® SDC Subcommittee may re-categorize each competition to fill all available presentation space throughout the day, thus maximizing the number of teams who can compete at WEFTEC.

The Wastewater Design Competition is intended to include, but is not limited to, traditional wastewater collection and treatment design projects, e.g., hydraulic capacity design, upgrades to existing treatment systems, biosolids handling, small-scale community wastewater treatment designs, and other related topics. The Water Environment Design Competition is intended to include but not limited to, design projects related to stormwater management, watershed management, green infrastructure, low impact development, water reuse, wetland construction, distributed treatment systems, groundwater treatment, **drinking water treatment systems**, and other related topics. Both competitions will follow the same guidelines and the same scoring system. Each MA may only select one team per competition per year to participate. However, individual consideration will be given to team placement in either competition on a case-by-case basis at the discretion of the WEF® SDC Subcommittee.

The scope and extent of the project should be consistent with the level of a senior or graduate engineering/science design or capstone course. Please note that the WEF® SDC Subcommittee encourages teams to balance the quality of their work with the quantity of design components, and for each MA to consider this when determining the scope of their problem statement. For example, design of both a collection system and facility expansion may be too broad of a scope for the confines of this competition. **Students are expected to work with little assistance from an advisor, professor, and/or industry professionals/consultants.** However, the students may seek expert advice and ask questions of industry professionals to aid in their decision-making process, at the discretion of their MA, so long as the students are performing all work themselves. The students are expected to work together as a team to prepare a complete engineering design solution. Students may use any printed or digital references or resources they choose, with appropriate citations.

Students are expected to perform the necessary design calculations for the project. **This is not intended to be a study or research project or literature review.** Although some initial literature review and/or research will be required, the bulk of the project should incorporate pertinent calculations for design.

For example, a standard design project involving a wastewater treatment plant expansion would include many or all of the following components:

- Sufficient background information with a clearly stated problem statement;
- Analysis of alternative solutions which may include a decision matrix;
- Hydraulic profile;
- Preliminary sizing of major equipment (aeration basins, clarifiers, chlorine contact chambers, etc.);
- Incorporated information from different manufacturers;
- Population analysis to determine design flow rates; and
- Preliminary cost evaluation for both capital and operational costs.

All of the design work should be submitted in the design report, clearly labeled, and referenced. See Design Report Requirements section for information regarding the report.

Sample MA Competition Timeline:

Experience and conversations with students who have participated in this type of competition in the past indicated the need for the problem statement to be given approximately 3 to 4 months prior to the competition. A sample timeline is shown below to give relative timeframes that would be ideal for the competition to be successfully completed on the MA level. It should be noted that the dates are given only as a guideline and may be adjusted to suit the MAs and/or student chapters participating. The WEF[®] SDC specific timeline follows later in this package.

1. MAs develop a problem statement and assemble design competition packets. (January)
2. MAs distribute the problem statement to interested student chapters or teams. This would be the formal beginning of the regional competition. (January)
3. MA level competitions held. (April/May)
4. The winner from each MA competes nationally at WEFTEC. (September/October)

REQUIREMENTS FOR THE WEF[®] SDC

1. **TO BE ELIGIBLE**, each presenter must be a registered WEF[®] student member who has been both:

- Selected by their student chapter to participate*.
- Certified by the individual MA as a WEF[®] student member in good standing.

To be thusly certified, a new WEF[®] student member must have filed an application and paid the required dues for membership before the first day of the month prior to that year's competition. The same holds true for continuing student members.

*The WEF[®] SDC Subcommittee acknowledges that teams willing to participate may not have a WEF[®] Student Chapter. Under these circumstances, as long as the participants are WEF[®] student members and student members of their local MA, they will be allowed to participate. If an international team wants to participate and does not have the opportunity to register as a WEF[®] student member of a local MA, they will be allowed to participate at the discretion of the WEF[®] SDC Subcommittee.

2. Student members who have graduated at the time of WEFTEC will be allowed to participate if they were a registered student within the last 12 months.
3. Teams may consist of more than four members. However, a maximum of four team members shall be permitted to present at WEFTEC. One additional team member may be on the presentation platform but shall be dedicated solely to advancing the presentation slides. If desired, additional team members may participate in the question-and-answer portion of the presentation. There is no limit on the number of team members who may participate in the design project and write the submitted report. Team members must be finalized prior to the SDC as noted in the table below.
4. Student teams who are accepted into the WEF[®] SDC will compete through a written submission and an oral presentation. Refer to the timeline below for information on submission deadlines for each of these two deliverables.
 - a. Written: A design report complying with the requirements set forth in this document must accompany each entry.
 - b. Oral: Each team's presentation will be 15 minutes followed by up to a 10-minute question-and-answer period. Team presentations will be held to the 15-minute time limit and will not be permitted to continue beyond the limit. The presentation files shall be saved in the PowerPoint format provided by the WEF[®] SDC Subcommittee and submitted per the requirements set forth in this document. The PowerPoint file submitted will be the version presented at the competition. Teams will not be permitted to revise the files following the presentation submission deadline.
 - c. Both written and oral presentations are subject to questioning during the question-and-answer period. However, questioning is limited to the judging panel only.

ENTRY FEE - There is no entry fee for the WEF[®] SDC. However, team members are expected to be registered WEF[®] student members.

TIMELINE OF THE WEF[®] SDC:

DATE	ACTION ITEM
May 1, 2023	Teams or MA representatives shall notify the SDC Subcommittee Co-chairs, via the OpenWater portal (accessed via the WEF [®] SDC webpage), of their intent to participate in the WEF [®] SDC. Teams shall indicate whether or not their local MA will be hosting or has hosted a MA level SDC.
June 1, 2023	Teams shall submit, via the OpenWater portal, a completed Entry Form. See Attachment A.
June 1, 2023	Teams will submit, via the OpenWater portal, an executive summary or "in-progress" written report for review by the WEF [®] SDC Subcommittee. In addition, teams shall submit a detailed abstract to serve as a summary of the design, not to exceed 200 words. The project name, university name, advisor's name, and entrants' names shall also be included with the submission. Refer to Attachment B for details on submission requirements.

Last week of August 2023	At least one representative member of each team shall participate in a webinar hosted by the WEF® SDC Subcommittee to review design report submittal requirements, expectations for competition participants, and general competition questions. One team member is required to participate but other team members are permitted and recommended as well. Webinar information will be provided to the team via the contact information provided on the official Entry Form.
August 18, 2023	Electronic copies of the completed design report are required to be submitted. A single electronic file, as a PDF, of the compiled design report shall be uploaded via the OpenWater portal on the SDC webpage. Uploads shall be completed no later than this date.
September 1, 2023	Deadline for WEFTEC registration and final confirmation of team members who will present.
September 15, 2023	Teams shall submit a copy of their PowerPoint presentation via the OpenWater portal on the SDC webpage. The PowerPoint file submitted will be the version presented at the in-person WEFTEC Competition. Revisions after this date will not be permitted. Uploads shall be completed no later than this date. (Any team with approval from the WEF® SDC subcommittee to participate virtually shall also submit their prerecorded presentation at this time.)
October 1, 2023	WEFTEC SDC in Chicago, IL (Accepted virtual participants will participate in a live Q&A via ZOOM with the judges at their scheduled time on this day.)

SCORING FOR THE WEF® SDC

It is recognized that engineering professionals must possess a well-developed ability to communicate both orally and in writing. The competition is designed to emphasize the value of delivering both high quality written reports and technical presentations. Scoring of the design will be determined through an evaluation of both the competitors' written and oral presentation skills, along with the technical content of the design solution. Scoring sheets have been developed for evaluating both the written (design report) and the oral presentations and will be used by the judges as the basis for judging all competing teams (see Scoring Sheet - Attachment C).

The written submission (in electronic format) will be evaluated by the judges and scores for the written submission of the competition will be submitted to the Subcommittee prior to the oral presentations. An electronic copy of the written report will be available to the judges during the oral presentation for their reference.

Prior to the competition, teams are encouraged to practice presenting their oral presentations in front of professors, students, and/or advisors to receive feedback regarding presentation timing, content, and delivery. During the WEFTEC competition, the oral presentations will be

evaluated by the judges based on both the quality of the presentation and proficiency in answering questions in the ensuing question-and-answer period. Scores for the oral presentations will be submitted by the judges to the Subcommittee.

The Subcommittee will compile the written and oral presentation scores and determine the final ranking of the teams participating in the competition. All scores will be kept confidential. Judges' comments regarding that team's performance, if given, may be provided at that team's request following the completion of the WEF® SDC.

The order of team presentations will be selected at random prior to the competition. Teams will be notified of their time slot prior to the WEF® SDC. All team members for each team must check-in, in person, with a representative of the SDC Subcommittee prior to the start of the competition on the morning of. Competing student teams are required to watch other student teams' presentations. Student teams are further encouraged to invite leadership and members of their MA to attend the competition. Student teams are required to be present for the entire day of the oral presentations through the conclusion of the awards ceremony. They are also required to participate in the Process Challenge, networking opportunities, and reception as well as other events put on throughout the day of the competition. Failure to check in or be present to support other teams throughout the day will lead to scoring penalties (see Penalties section).

DESIGN REPORT REQUIREMENTS

An electronic copy of the design report shall be created in a single PDF format file that is organized with a cover page, table of contents, report sections, and appendices, if used. The single PDF file shall be uploaded as directed by the Subcommittee. Failure to submit the electronic copy in a PDF format will result in a deduction to the team's overall score (see Penalties section). A hard copy submission of the design report is not required.

The single electronic file must be submitted to the Subcommittee through the OpenWater portal (accessed through the WEF® SDC webpage) by the stated deadline. Non-compliance with these requirements will result in penalties (see Penalties section).

The design report shall include, in the following order:

1. **Cover Page** – with project name, university name, year, and entrants' names.
2. **Table of Contents**
3. **Abstract** – Please use the original abstract form submitted (see Attachment B), which includes a brief summary of the design, not to exceed 200 words.
4. **Summary of Project Team Effort** – Provide a 1- to 2-page summary of the project team effort, including:
 - Each team member's name and role in the effort
 - Names of any other individuals that assisted in the effort, including advisors, professors, and industry professionals/consultants.
 - MA representatives who facilitated the design project
5. **Project Description** – Provide a description of the design problem, alternatives evaluation, and recommended design solution (**not to exceed 20 pages***), including the following information:

- **Statement of design problem.**
- **Discussion of alternatives evaluation** – Discussion should provide a clear description of the alternatives and evaluation technique.
- **Description of recommended design solution** – Discussion must cover the salient facts upon which the recommendation is made, present a clear recommendation of action, and provide bases for design. Relevant data should be presented in a clear manner. All elements shown on the judging form should be addressed, including economic analysis.
- Formatting to include a minimum of 0.75-inch margins on all sides; Calibri, Arial, or Times New Roman font with a minimum 11-point font size.
- Pages of the Project Description portion of the report shall be continuously numbered.
- Color diagrams, graphics, plots, and photographs may be included to reflect the unique features of the project. Each is to be identified with an appropriate descriptive caption. Graphics/photos included within the project description will count toward the 20-page limit. Alternatively, these may be included in the Supporting Documentation, if used.

***The number of pages used in the Project Description is checked to ensure compliance with the 20-page limit. Non-compliance may result in penalties (see Penalties section).**

6. Supporting Documentation – If needed, provide drawings, calculations, tables, vendor submittals, detailed cost estimates, and other voluminous documents, as appendices.

7. References/Acknowledgements – All references and resources used for this project shall be cited appropriately.

The judges will be directed to focus their review on the Project Description section of the design reports. Teams shall develop their materials such that their complete analysis and design solution may be understood from the 20 pages of material provided in the Project Description.

Teams are encouraged to use a checklist to ensure all necessary documents are included in the design reports. Failure to ensure all documents are accounted for may result in a penalty.

The Subcommittee will not review any submittal prior to the official submission.

ORAL PRESENTATION REQUIREMENTS

A presentation describing the team’s design problem, approach, evaluation, design effort, and recommendations shall be created in PowerPoint format. This information will be presented by the team during the oral portion of the competition at WEFTEC. Prior to the

competition, the single PowerPoint file using the template provided shall be uploaded to a collection site as directed by the Subcommittee. Teams must notify the Subcommittee of any embedded animations or video material to confirm that this material is compatible with the computer that will be used during the competition. The PowerPoint file must be submitted to the Subcommittee by the stated deadline. Non-compliance with these requirements may result in penalties (see Penalties section).

Presentation remotes (e.g., clickers or pointers) will be provided by the WEF® SDC Subcommittee. However, students may bring their own for use during their presentation. USB connected remotes generally are more compatible than Bluetooth connected remotes. Students will not have the opportunity to test out any electronic devices prior to the start time of their oral presentation. Students will be prohibited from providing any printed material to the judges at the competition.

A typical presentation room layout is shown below. Materials include a podium with microphone, tables and chairs, presentation screen, and stage.



JUDGING CRITERIA

WEF® is a multi-disciplined environmental professional organization dedicated to quality in practice of the profession. Accordingly, judging will be based on the elements outlined below and in the scoring sheets provided in Attachment C. The Subcommittee reserves the right to adjust the format and content of the scoring sheets provided in Attachment C prior to commencement of the competition. Participating teams will be provided with a copy of the revised sheets prior to the competition if such adjustments are made.

1. **DESIGN REPORT:**

- a. **Technical.** Was the Project Description section of the report organized effectively with a Statement of Problem, appropriate background information, clear description of the alternatives evaluated, etc.? Was a continuous, logical sequence of steps taken to solve the design problem? Was the recommended solution feasible and appropriate to address the problem statement? Was creativity and an innovative approach used? Was knowledge of subject matter demonstrated? Was the design solution analyzed for economic feasibility; was this analysis presented? Were works cited and credit to resources and assistance correctly presented? Was the complete analysis and design solution presented clearly within the 20-page Project Description?
- b. **Presentation.** Were visual aids (graphs, supporting info, pictures, etc.), presented clearly? Were correct grammar, correct spelling, and appropriate technical writing methods used? Was the formatting and organization of the report presented in a logical manner?

2. **ORAL PRESENTATION:**

- a. **Content.** Was the subject technical or general in nature? Was technical subject matter relevant to design? To what extent was subject of interest to a technical audience? Was knowledge of subject and presentation content exhibited by team members? Was the work presented independent and original? Was credit given for source of material or contribution by others? Was there any novel approach to the solution?
- b. **Organization.** Was there sufficient background information provided to introduce the audience to the subject? Were facts developed in logical and continuous sequence? Was there a definite conclusion and was it adequately based on the facts or data presented?
- c. **Delivery and Effectiveness.** Was appropriate volume used to reach all audience members? Did team members use proper grammar and syntax? Was the vocabulary used sufficient? Were the words distinctly pronounced? Did the team members act professionally while presenting? Was the manner of delivery (conversation, memorized, read from manuscript) satisfactory? If visual aids were used, how effectively were they used?
- d. **Discussion.** Did the presentation evoke spontaneous questions from the panel? Did questions indicate the need for clarification of facts presented or were they merely of the type seeking additional information? How readily and with what self-assurance did the speaker answer questions? Did the answers indicate knowledge of subject beyond that disclosed in the original presentation?

The judges will have the opportunity to comment on the design reports and presentations during the judging process. At the request of the team, any judging comments may be sent for feedback if given. At this time, our judges do not commit to large amounts of feedback. Teams will not be allowed to view the scoring of any other team within the competition.

PENALTIES

Failure to comply with the above requirements may result in penalties for a team's final score. Penalties are at the discretion of the Subcommittee and may include, but are not limited to, the following:

- Failure to submit both an executive summary/in-progress report and abstract within the guidelines set forth herein (3 points);
- Failure to submit an electronic copy of the design report compiled in PDF format within the guidelines set forth herein (3 points);
- Failure to submit the PowerPoint presentation within the guidelines set forth herein (3 points);
- Failure to submit entries on-time (1 point per day late (added to initial 3-point late penalty mentioned above));
- Failure to register for WEFTEC by the listed deadline (1 point per member not registered);
- Failure to attend webinar in August 2023 (only 1 member per team required to attend) (3 points);
- Failure to show good faith presence throughout the day at WEFTEC's live presentations (10 points);
- Failure to check in with the Subcommittee at the time specified in the webinar on the morning of October 1, 2023 (5 points).

AWARDS

The winning teams will be announced immediately after the completion of both competitions. Prizes for the winner(s) at WEFTEC will vary depending on sponsorship opportunities and are subject to change at the discretion of the Subcommittee. Winning teams will also receive a recognition plaque. Monetary awards are at the discretion of the Subcommittee.

Plaques and prizes will be distributed from WEF® to the winning team's MA after WEFTEC. Efforts may be made to deliver the plaques to the winning team's advisor based on the contact information provided on the Entry Form. The amount of monetary award and manner of delivery to the winning team by the MA is at the MA's discretion. The representative teams are responsible for understanding their MA's policies prior to the team's participation at WEFTEC.

Monetary prizes are intended to be awarded to offset student travel to WEFTEC and to support the student chapter of the winning team. Every opportunity should be made by the MA to assist the student team in competing at WEFTEC, and serious consideration should be made for awarding money toward travel expenses to attend WEFTEC. Similarly, each MA might seek out sponsorships from local industries, municipalities, and consulting firms in order to help the winning team attend WEFTEC.

INCREASING THE VALUE OF COMPETITION ATTENDANCE

Teams are encouraged to check the WEFTEC schedule for additional opportunities for technical learning (technical sessions, workshops, exhibit tours), networking (career fair, SYPC meeting, student social events, university lounge), and volunteering (service project, committee meetings) and to make necessary travel arrangements to take full advantage of the WEFTEC attendance experience for students as well as for young professionals. WEFTEC 2023 holds events from September 30th to October 4th.

QUESTIONS OR COMMENTS

Please review the entire package and contact the WEF® SDC Subcommittee for clarification on any of the requirements or guidelines of the competition.

SAMPLE PROJECT

Below is a sample information packet that would be given to each student team wishing to compete at the MA level. This was an actual problem description and packet given to a student team competing at the MA level. Note this is only given as a general idea of sample project description and information. This packet would vary with the amount of information provided and contact names. A copy of the SDC Guidelines should also be included.

DESCRIPTION OF PROJECT

This year's design project is a three-part project and includes the preliminary design of a sewer collection system, a wastewater treatment plant expansion, and a reuse irrigation distribution system for a large development in Jupiter, FL known as Abacoa. A contact at the WWTP should be provided if possible so that teams may arrange tours of the plant as part of the project.

Part 1 – Sewer Collection

Based on Abacoa's community master plan, design the back-bone sewer infrastructure that will collect sewage from the community and transport the sewage to the treatment plant location.

Part 2 – Sewage Treatment

As a result of the growing community, the Loxahatchee River District's (LRD) Regional Wastewater Treatment Plant (WWTP) will need to be expanded. With reuse being a favorable method of effluent disposal, LRD desires the expansion to contain nitrogen reduction processes that would drive the nitrogen under the existing ground water standards of 10 ppm.

Part 3 – Reuse Irrigation

Based on the community's irrigation needs, design a reuse irrigation system and backbone distribution system that will provide irrigation-quality water from the WWTP to the development.

The following documents are attached to assist in the preparation of the recommended program developed by the student chapters:

- Exhibit A - Development master plan of Abacoa
- Exhibit B - Map of Jupiter
- Exhibit C - Loxahatchee River District Wastewater Treatment Plant Drawings
- Exhibit D - WWTP Monthly Operating Report (MOR)
- Exhibit E - WWTP Capacity Analysis Report
- Exhibit F - Abacoa Irrigation Master Plan
- Exhibit G - Scoring Sheet for SDC
- Exhibit H- Entry Form

ATTACHMENT A

TEAM ENTRY FORM

Please note: Teams should review the information required in this, Attachment A, as it is the same information required in the electronic entry form to be submitted on June 1, 2023.

TEAM ENTRY FORM

WEFTEC 2023 SDC

SUBMIT ENTRY FORM BY JUNE 1, 2023

Please note - Names provided below will be used in competition brochures and on plaques for the winning teams, as shown. Please make sure all names are included and written correctly.

Project Title: _____

Wastewater Design Competition Water Environment Competition

Name of University: _____

Address: _____

City: _____ State: _____ Zip: _____

Faculty Advisor:

Full Name and Credentials (PE/PhD/etc): _____

Phone: _____ Email: _____

Team Leader / Responsible Contact Individual:

Name: _____ Level in School: _____

Phone: _____ Email: _____

Name(s) of Additional Team Members: *(use additional paper if necessary)*

Name: _____ Level in School: _____

Email: _____

Name: _____ Level in School: _____

Email: _____

Name: _____ Level in School: _____

Email: _____

Name: _____ Level in School: _____

Email: _____

Name: _____ Level in School: _____

Email: _____

Team's Member Association Contact: *(MA Competition Chair, MA Student Activities Chair, other)*

Name: _____ Position: _____

Phone: _____ Email: _____

ATTACHMENT B

PROJECT ABSTRACT FORM

Please note: Teams should review the information required in this, Attachment B, as it is the same information required in the electronic entry form. Executive Summaries or In-progress Reports should be uploaded as a separate PDF at the time of entry form and abstract submission.

PROJECT ABSTRACT FORM

WEFTEC® 2023 SDC

SUBMIT ABSTRACT FORM BY JUNE 1, 2023

Project Title: _____

University: _____

Faculty Advisor: _____

Team Members: _____

Abstract (not to exceed 200 words) – failure to comply with fully detailed project description can result in rejection of abstract. Abstracts will be used in marketing materials for the competition.

EXECUTIVE SUMMARY OR IN-PROGRESS REPORT SUBMISSION

WEFTEC® 2023 SDC

SUBMIT EXECUTIVE SUMMARY OR IN-PROGRESS REPORT DRAFT BY JUNE 1, 2023

The Executive Summary or In-progress Report will be reviewed by the WEF® SDC Subcommittee to determine the placement of each team in the most appropriate competition category. Content included in either the Executive Summary or In-progress Report should be sufficient to demonstrate the progress of the team as well as the scope of the project. Page requirements and limits are as follows:

If an Executive Summary is submitted to meet this requirement, it should be no less than 2 pages and no more than 5 pages with figures.

If an In-progress Report is submitted to meet this requirement, it has no page restrictions but should be submitted without appendices. The In-progress report is intended to be a copy of the design report at the time of entry material submission.

ATTACHMENT C

EXAMPLE SCORING SHEETS

EXAMPLE SCORING TALLY SHEET 2023 SDC

Team:			
Title:			
	Report Score	Presentation Score	Total
Judge #1			
Judge #2			
Judge #3			
Judge #4			
Average Score			
PENALTIES (to be assessed by Subcommittee)			
FINAL SCORE (Sum of Average Scores minus Penalties)			

EXAMPLE SCORING SHEET 2023 SDC DESIGN REPORT

Name of Team/University: _____

Project Title: _____

Judge: _____

Technical Content - 80 pts

1. Appropriate level of detail used in introduction, statement of problem, background information provided to ensure reader fully understands the scope of the project? (5 pts)..... _____
 2. Continuous, logical sequence of steps to solution presented including justification for decisions and clearly demonstrating the team's technical knowledge? (15 pts) _____
 4. Was design solution feasible and appropriate to address problem statement? Were all relevant aspects required by the problem statement included in the final design solution? (15 pts) _____
 5. Were creativity and innovative approaches applied? (20 pts) _____
 6. Was knowledge of subject matter demonstrated? (10 pts)..... _____
 7. Were appropriate economic and feasibility analyses presented? (10 pts) _____
 8. Were appropriate citations use to credit resources? (5 pts) _____
- TOTAL (80 pts).....** _____

Report Appearance and Organization - 20 pts

1. Were visual aids (graphs, supporting info, pictures, etc.) presented clearly? (10 pts) _____
 2. Were correct grammar, correct spelling, and technical writing methods used? (5 pts) _____
 3. Was formatting and organization of report presented in a logical manner? (5 pts) _____
- TOTAL (20 pts).....** _____

GRAND TOTAL (100 pts) _____

COMMENTS:

EXAMPLE SCORING SHEET 2023 SDC PRESENTATION

Name of Team/University: _____

Project Title: _____

Judge: _____

Presentation technical Content - 45 pts

1. Presentation included sufficient depth of technical information (15 pts)..... _____
 2. Team displayed adequate knowledge of subject and presentation content (15pts)..... _____
 3. Recommended design solution was original and innovative (15 pts)..... _____
- TOTAL (45 pts).....** _____

Presentation Organization - 20 pts

1. Sufficient background information was provided (5 pts)..... _____
 2. Essential facts were developed in a logical and continuous sequence (10pts)..... _____
 3. Recommended design solution was based on facts and data presented (5 pts) _____
- TOTAL (20 pts).....** _____

Delivery & Effectiveness - 25 pts

1. Presentation and visual aides were clear, legible, and effective (10 pts)..... _____
 2. Vocal delivery was appropriate (not memorized nor read directly; proper volume, distinct pronunciation, and appropriate vocabulary used) (10 pts) _____
 3. Eye contact was made with judges and audience(5 pts)..... _____
- TOTAL (25 pts).....** _____

Discussion - 10 pts

1. Answers to questions posed by judges were clear and technically correct (5 pts)..... _____
 2. Answers indicated knowledge of subject beyond presented material (5 pts) _____
- TOTAL (10 pts).....** _____

GRAND TOTAL (100 pts) _____

COMMENTS:
