



## Changes to the Student Design Competition

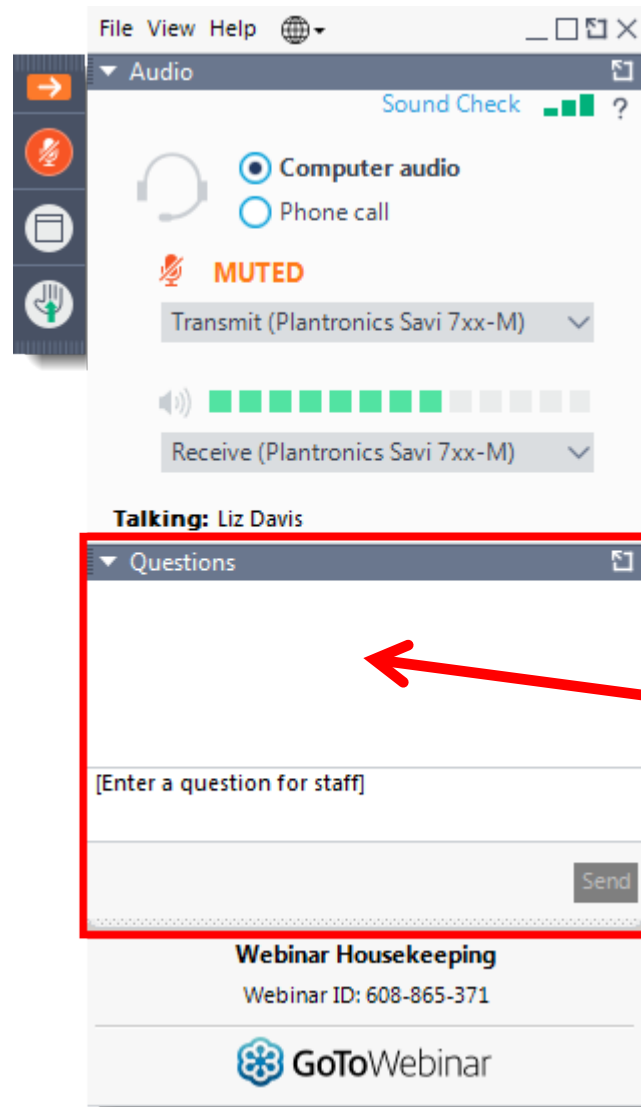
January 27, 2020

Presented by the WEF Students & Young Professionals Committee

# Agenda

- Introduction to the WEF® Student Design Competition
  - SYPC and Subcommittee structure / leadership
  - Competition history and structure
- Changes for the 2020 Competition
  - Accommodating rapid growth
  - How these affect you
  - Important dates
- Staying connected
  - Benefits to students and your MA
  - How to start a team

# How to Participate Today



- **Audio Modes**
  - Listen using Mic & Speakers
  - Or, select “Use Telephone” and dial the conference (please remember long distance phone charges apply).
- **Submit your questions using the Questions pane.**
- **A recording will be available for replay shortly after this webcast.**

# SDC Overview



# WEF® SYPC Leadership



**Pono Hanson**  
**SYPC Vice-Chair**

**Location:** Washington, DC, USA  
Chesapeake Water Environment Association  
**Email:** [PHanson@BrwnCald.com](mailto:PHanson@BrwnCald.com)



**Nashita Naureen**  
**SYPC Vice-Chair**

**Location:** Phoenix, Arizona, USA  
Arizona Water Environment Association  
**Email:** [NaureenN@bv.com](mailto:NaureenN@bv.com)



**Vanessa Borkowski**  
**SYPC Chair**

**Location:** Hartford, Connecticut, USA  
New England  
Water Environment Association  
**Email:** [Vanessa.Borkowski@stantec.com](mailto:Vanessa.Borkowski@stantec.com)



**Megan Livak**  
**WEF SYPC Manager**  
**Location:** Alexandria, Virginia, USA  
**Email:** [MLivak@wef.org](mailto:MLivak@wef.org)

**Meet some other committee members at:**

<http://wef.org/membership/committees2/committees-m-z/students-and-young-professionals-cor>





# WEF® SDC Leadership



**Guy Yager**

**SDC Co-Vice Chair**

**Location:** Walnut Creek, California, USA  
California Water Environment  
Association

**Email:** [YagerG@bv.com](mailto:YagerG@bv.com)



**Stephanie Castro**

**SDC Co-Vice Chair**

**Location:** White Plains, New York, USA  
New York Water Environment  
Association

**Email:** [Stephanie.Castro@arcadis.com](mailto:Stephanie.Castro@arcadis.com)



**Bernadette Drouhard**  
**SDC Co-Chair**

**Location:** Atlanta, Georgia, USA  
Georgia Association of Water  
Professionals

**Email:** [DrouhardB@bv.com](mailto:DrouhardB@bv.com)



**E.J. Katsoulas**  
**SDC Co-Chair**

**Location:** Denver, CO, USA  
Rocky Mountain  
Water Environment Association  
**Email:** [EJ.Katsoulas@tetrattech.com](mailto:EJ.Katsoulas@tetrattech.com)



**Brad Lovett**

**WEF Manager, Association Engagement**

**Location:** Alexandria, VA, USA

**Email:** [BLovett@wef.org](mailto:BLovett@wef.org)



# WEF® SYPC Highlight



**Ann Sager**

**SDC Webinar Champion**

**Location:** Fairfax, Virginia, USA

Virginia Water Environment Association

**Email:** [asager@hazenandsawyer.com](mailto:asager@hazenandsawyer.com)



# History of the Competition

2009

SDC split into  
Wastewater and  
Water  
Environment  
competition  
categories, **11**  
Teams participate

2019

Participation  
increases to  
**29** Teams!

2020

Requires  
changes to SDC  
structure and  
cap of **34** Teams

1996

Florida WEA's  
1<sup>st</sup> Student  
Design  
Competition

2002

Competition goes  
National  
at WEFTEC®, **4**  
Teams participate

2016

Participation  
increases to  
**15** Teams!



# What are the goals of the WEF® SDC?

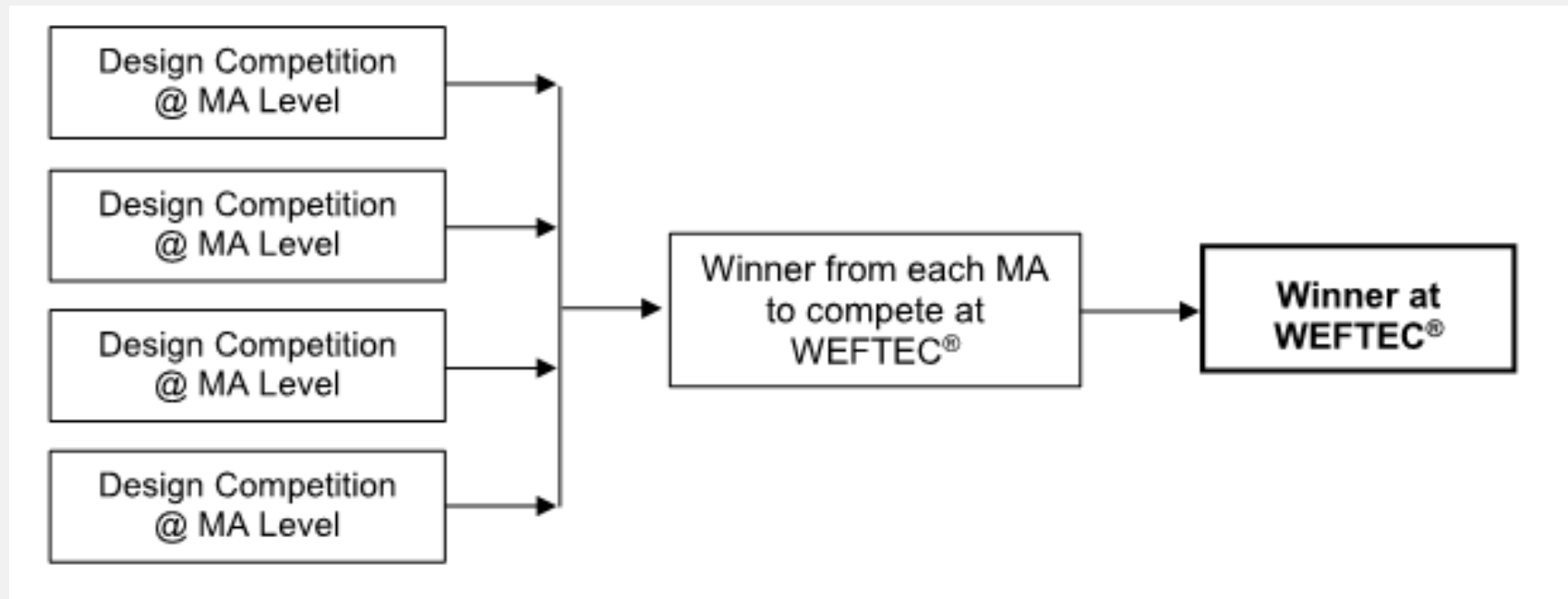
To promote **“real world” design experience for students** interested in pursuing an education and/or career in water/wastewater engineering and sciences.

# What is the WEF® SDC?

This competition **tasks individuals or teams of student members** to demonstrate the ability to **evaluate alternatives, develop a comprehensive design, and present a solution** that meets the requirements of a socially relevant problem statement.

# Who competes?








- WEF® SDC brings together various member association-level competitions where the student groups, winners of their MA's competition, compete at WEFTEC®



# Intended Content of the Design Competition

Problems related to protection of water resources and public health



-  Sewer and pump station design
-  WWTP expansions/retrofits
-  Biological treatment
-  Reuse
-  Constructed wetlands
-  Sustainability efforts
-  Stormwater management

*If you have a question about the suitability of your problem statement, please reach out to the Subcommittee! We are happy to review problem statements and provide recommendations for tailoring them to the national competition*

# Design Competition

- Two competitions are held at WEFTEC®:

Wastewater







Water Environment



*Both competitions will follow the same guidelines and scoring system*

# Wastewater Competition







Intended to include traditional wastewater collection and treatment design projects

-  Hydraulic capacity design
-  Collection systems
-  Additions to existing WRRF processes
-  Biosolids handling
-  Biological nutrient removal
-  WRRF process optimization



# Water Environment Competition

Intended to include contemporary engineering topics

-  Stormwater management design
-  Green infrastructure
-  Low impact development
-  Water reuse
-  Wetland construction
-  Distributed treatment systems



# Competition Components

## Oral Presentation

- 20-minute presentation
- 10-minute Q & A period

## Written Report

- Preliminary Engineering Report
- 20-page limit

- Both subject to questioning during the Q&A period
- Questioning is limited to the judging panel only

*Remains unchanged from previous structure.*



# Student Team Requirement

- 1 Selected by their Member Association to participate
- 2 WEF<sup>®</sup> student member in good standing



# Student Webinar

Occurs in the summer preceding the WEFTEC® competition

Provides an overview of what to expect at the SDC and WEFTEC®

- Only one student from each team is required to attend
- Highly recommend that all students attend
- Duration of the webinar is about 1 hour

*Informative session aimed to improve students' WEFTEC®  
experience!*

# Changes to the SDC in 2020

# Abstract Review and New Entry Materials

Abstracts are still required for publishing of the booklet

New requirements for one of two deliverables from teams:

- In-progress Report

**OR**

- Executive Summary

Purpose is to allow for better grouping of competing teams

Materials will be reviewed more intensively, in a similar fashion to technical abstracts submitted for WEFTEC®

*Deliverables will be submitted via email*

# Limited Number of Participating Teams

Competition will be altered in order to allow the maximum number of teams to attend

- Morning & Afternoon competition blocks
- Teams only *required* to attend their competition block

Presentation and Q&A timing **will not change**

Maximum number of teams is 34—17 per competition without reducing teams timing

Competing MA's will have at least 1 team at WEFTEC<sup>®</sup>, provided they meet requirements

- Second teams from the same MA will be confirmed once all competition entrants are evaluated

MA selects teams from their SDC

Teams apply to compete in WEF® SDC

If MORE than 34 teams apply

If LESS than 34 teams apply

**All submissions are reviewed.**  
Any team that does not meet requirements in WEF® SDC Guidelines is rejected.

**All submissions are reviewed.**  
All teams that meet requirements in WEF® SDC Guidelines invited to compete.

If MORE than 34 teams remain

If 34 or less teams remain

Z-score method will be used to evaluate all submissions from MAs sending 2 teams

Lowest scoring submissions removed (ensuring each MA still has 1 team) until only 34 teams remain

*The SDC Subcommittee expects 30-34 teams to apply in 2020, but we have a plan in the event that more than 34 do.*

# How these changes affect you

MA's who have traditionally sent a *single* team to WEFTEC®:

- **No change.**
- Triple check their submission complies with the updated WEF® SDC Guidelines
- Inform your team of additional application requirements that are new in 2020

MA's who have traditionally sent *multiple* teams to WEFTEC®:

- **If more than 34 teams apply**, you will hear from the SDC Subcommittee regarding the status of their applications
- If your second team is not invited to compete, they are still welcome to participate in other SYP events at WEFTEC®!

MA's who have *not* sent a team to WEFTEC® before:

- **Welcome!**
- Pay careful attention to all requirements in the updated WEF® SDC Guidelines
- Contact the SDC Subcommittee with any questions

*The SDC Subcommittee expects 30-34 teams to apply in 2020, but we have a plan in the event that more than 34 do.*



# Important Dates

**May 1** – MA's to notify the SDC Subcommittee Chairs of intent to participate in the WEFTEC® SDC

**May 29** – Application materials due (including the online entry form, abstract, and executive summary OR in-progress report)

**End of June** – Student webinar

**August 21** – Electronic and hard copies of design report due

**September 25** – Electronic copy of the powerpoint presentation due

**October 4** – Competition at WEFTEC® in New Orleans

# The 2020 SDC Guidelines are now LIVE!

- The updated WEF Student Design Competition Guidelines have been uploaded to the SDC website:
  - <https://www.wef.org/membership/students-and-young-professionals2/student-design/>
- A concise summary of the differences between 2019 and 2020 competitions will be posted later this week

# Staying Connected (and what's in it for you!)

# SDC Benefits for Member Associations



Great forum to showcase the talent of the next wave of water professionals coming out of your region



Opportunity to present innovative projects that are being conducted in your region



Excellent medium for forging relationships between a YP committee and student chapters within an MA



Bragging rights!



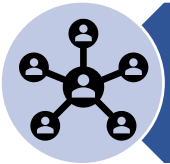
# SDC Benefits for Students



Real world design experience with a professional mentor



Opportunity to demonstrate and improve technical presentation and writing skills prior to employment



Networking with top industry professionals, young professionals, and peers



WEF and MA Involvement/ Participation



Attend WEFTEC®!



# SDC Subcommittee Outreach Efforts

- Regional liaisons
  - You will be provided with contact information for an SDC point-person in your region.
  - Feel free to reach out to that person throughout the year with any questions about the WEF SDC.
    - Important deadlines
    - Specific questions not explicitly addressed in the guidelines
    - Help with submitting any documentation

# SDC Subcommittee Outreach Efforts

- Phone survey
  - Regional liaison will be reaching out to you for an *optional* survey
    - 15-20 minute phone call
  - **Goal #1:** Opportunity for members of the WEF SDC Subcommittee to get to know champions of the MA SDCs
  - **Goal #2:** Compile a comprehensive database of how regional student design competitions are conducted
    - The SDC Subcommittee will then disseminate a guidebook based on this information for running a successful competition at the MA level, in order to aid regional student design competitions around the globe.

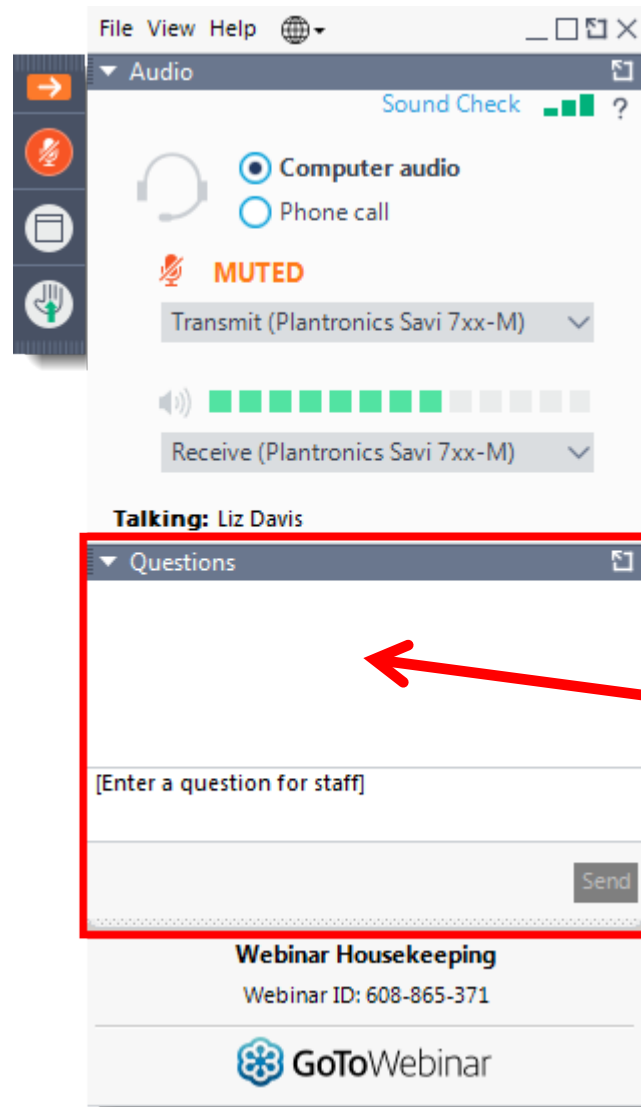
*While this is optional, we cannot make this initiative a success without your help!  
Your time and assistance is greatly appreciated.*



# Starting Up a Student Design Competition

- Oftentimes the most difficult part of running a SDC is getting it off the ground
- Use the WEF SDC Subcommittee as a resource!
  - We will ensure that there is a point person to answer questions and provide guidance during start-up
    - Resources required to run a competition
    - How to organize an SDC Committee in your MA
    - How to garner interest in your competition (and ultimately, participation!)
- Neighboring MAs are often a great resource, and can potentially host teams from your MA if you cannot hold a competition
  - "Multi-regional" competitions are becoming more popular

# How to Participate Today



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# Survey

Who is the primary contact for the SDC within your MA?

Do you have a local MA SDC?

If yes, what month does it occur in?

If you do not have a local competition, are you interested in starting one?

Do you typically send more than one school to the WEFTEC® SDC?



**CONTACT INFORMATION FOR WEF® STUDENT DESIGN COMPETITION:**

**Bernadette Drouhard**  
**SDC Co-Chair**

**Location:** Atlanta, Georgia, USA  
Georgia Association of Water  
Professionals

**Email:** [DrouhardB@bv.com](mailto:DrouhardB@bv.com)

**E.J. Katsoulas**  
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**Location:** Denver, CO, USA  
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**Email:** [EJ.Katsoulas@tetrattech.com](mailto:EJ.Katsoulas@tetrattech.com)

**Guy Yager**  
**SDC Co-Vice Chair**

**Location:** Walnut Creek, California, USA  
California Water Environment  
Association

**Email:** [YagerG@bv.com](mailto:YagerG@bv.com)

**Stephanie Castro**  
**SDC Co-Vice Chair**

**Location:** White Plains, New York, USA  
New York Water Environment  
Association

**Email:** [Stephanie.Castro@arcadis.com](mailto:Stephanie.Castro@arcadis.com)

**Brad Lovett**

**WEF Manager, Association Engagement**

**Location:** Alexandria, VA  
WEF

**Email:** [BLovett@wef.org](mailto:BLovett@wef.org)

# Questions?

