



ASCE 2024 Virginias Student Symposium Water Resources Competition

1. Objective: The objective of the water resources competition is to estimate the expected water quality in Claytor Lake over the course of the summer. The assessment will be made based on a data set that will be provided in advance as well as the collection of a water-quality profile from a boat during the course of the competition.

This competition will require teams to collect Claytor Lake water quality data from a boat on Friday, March 29, 2024.

For the 2024 Symposium, the competing teams will estimate the expected water quality in Claytor Lake (temperature and dissolved oxygen concentrations as a function of depth) over the course of the summer, starting with the observed water quality on the day of the competition.

2. Available data: Bathymetric data for Claytor Lake (that can be used to estimate the stage storage relationship including water volume and sediment surface area as a function of depth) as well as expected sediment oxygen consumption rate will be provided in advance of the Symposium. A single water-quality profile (depth, temperature and dissolved oxygen concentration) will be collected from a boat during the competition.
3. Eligibility: A team will consist of two or three undergraduate students who are in good academic standing and members of the ASCE student chapters.
4. Submittal: Each team's submittal will, at a minimum, include the following.
 - a. A report that shall be no more than three (3) pages long (not including any references and title page). One-inch margins, single spacing, and 12-point Time New Roman font are required.
 - b. The report shall contain the methods (assumptions, analytical procedures, numerical procedures, full sample calculations, etc.) that the team employed to develop the solution. Methods must be referenced properly.
 - c. The cover page must include the name of the institution; names, and email addresses of each team member; as well as the name and contact information of the faculty that advised the team in developing their prediction.
 - d. Submit your report electronically in PDF format to Dr. John Little (jcl@vt.edu) by 9 am Eastern Standard Time on March 30, 2024 with the subject line "2024 Virginias Symposium Water Resources Competition, School Name."

Sender will receive confirmation of receipt by email. Late submissions are not accepted. If you do not receive a confirmation email, please resend the information.



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5. Judging: The submitted reports will be judged and ranked based on criteria (a) through (e) below.

- a. Format, length, grammar, English usage 15%
- b. Clarity of technical presentation 15%
- c. Logical and concise use of appropriate methods and principles 20%
- d. Credibility of predictions 30%
- e. Quality of report including visuals 20%

The winning team will be announced at the Symposium.

6. Questions should be addressed to: John Little (jcl@vt.edu).