2022 Water Quality Modeling Workshop

LOGISTICS

September 20-23, 2022

Palmer House Hilton
17 E Monroe Street

EPA Region 5 Office
77 W Jackson Boulevard

SCHEDULE

Monday: Modeling 101
Tuesday: Full Group Plenary and Breakouts
Wednesday: Breakout Sessions
Thursday: Breakout Sessions
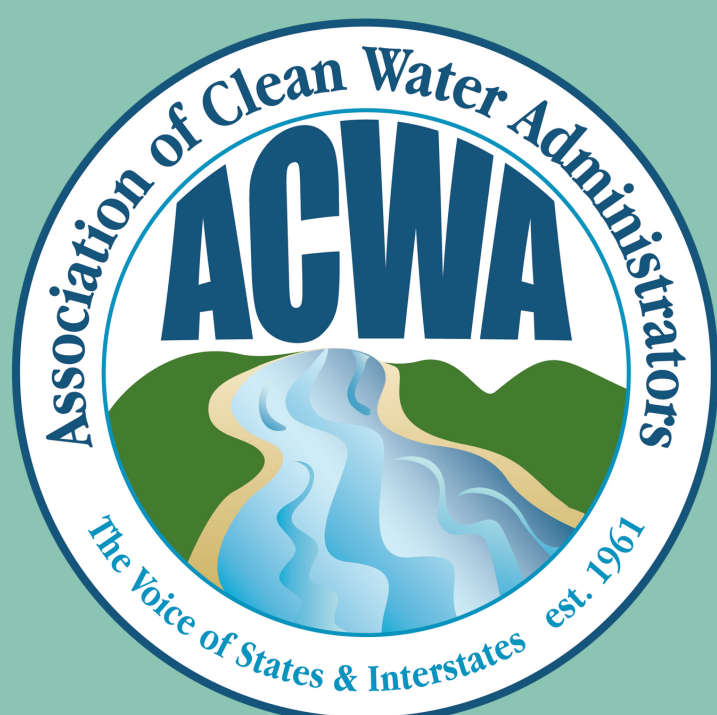**Friday**: Wrap-Up and Looking Ahead

INSTRUCTORS

Trainings will be provided by Tetra Tech contractors. The Qual2K training will be taught be Dr. Steven Chapra from Tufts University.

Qual2K

This workshop will focus on the following topics:

- Overview of river water quality modeling
- Data collection to support Qual2K applications
- All lectures will be reinforced by hands-on computer exercises

- Fundamentals of using the new version of Qual2K 3.0
  - Physics and temperature
  - Simple oxygen modeling (organic carbon, nitrification)
  - Modeling river eutrophication in rivers (including HABs)
  - Modeling pH, sediment-water interactions, and bacteria
  - Branched systems

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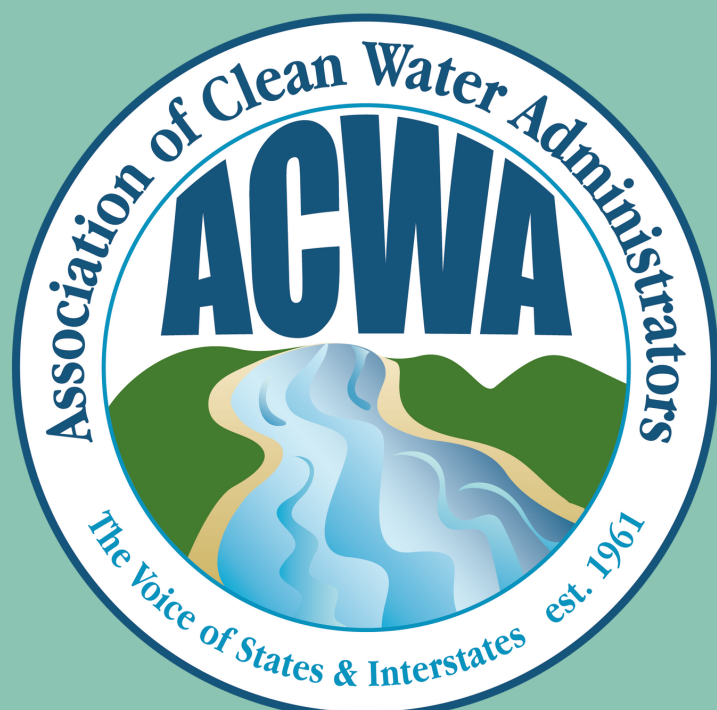**Thursday**: Breakout Sessions
Friday: Wrap-Up and Looking Ahead

INSTRUCTORS

Trainings will be provided by Tetra Tech contractors. The SWAT training will be taught be Dr. R. Srinivasan from Texas A&M University.

SWAT

This workshop will focus on the following topics:

- Model overview (theory)
- Model applications (theory)
- Introduction the the SWAT interface (GIS)
- Watershed delineation
- Landuse and soil overlay
- HRU delineation

- Weather and remaining inputs to develop the SWAT model (including point sources) using the SWATEditor
- Review of summary outputs
- Using the SWAT Check program to identify possible problems
- Finishing the SWAT simulation and saving result
- Addressing user requests and clarifying anything covered on the first two days

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INSTRUCTORS

Trainings will be provided by EPA and state staff.

Managers

This workshop will focus on the following topics:

- Hiring contractors
- Hiring/training staff
- Writing a modeling scope ofwork
- Model acceptance/getting EPA approval
- Developing a modeling QAPP/EPA approval

- Projects that cross state-boundaries
- Modeling traps, pitfalls, and tips
- Reviewing models completed by a contractor
- Modeling budgets
- Presenting complex data to the public
- Modeling for Climate Change