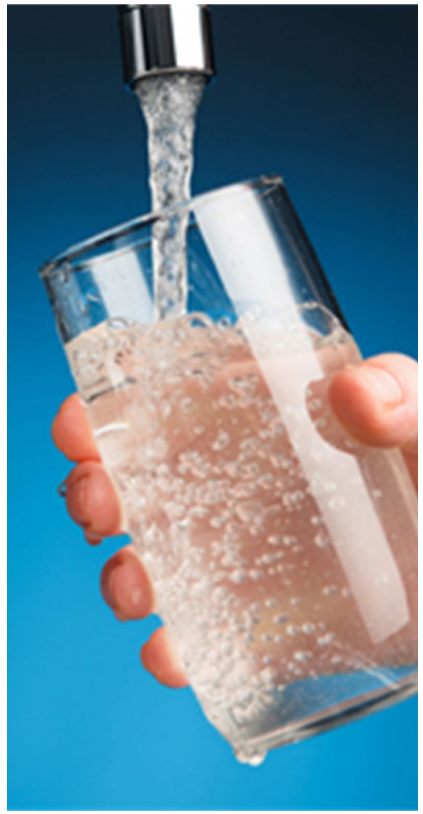
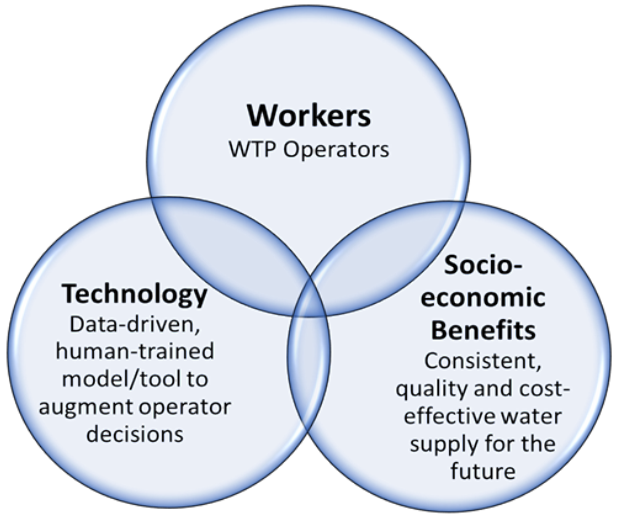
FW-HTF-P: Integrating Practitioner Knowledge and Technology for the Future of Water Treatment

PI(s): J. Camp (VU) - janey.camp@vanderbilt.edu, J. Gilligan (VU), Z. Tzankova (VU), S. Ivey (UofM), A. Hill (UofM), B. Waldron (UofM), and P. Sengupta (Calgary)



Background: Many WTP Operators are nearing retirement with a huge workforce pipeline to fill. Much of plant operations are straightforward chemical formulas, but some require experience and intuition. Nearly half of all operators surveyed in TN (2019) said their work is as much art as science. We must find a way to capture the "art" of water treatment to train the next generation.



Objectives: There is an urgent need to create tools and/or models that capture and replicate the experiential knowledge of current WTP operators (i.e., the experts) to improve and augment decision support for operators as we transition to the future workforce.

Key tasks:

- Establish **advisory committee** (provide evaluation and feedback on key deliverables and tasks)
- Literature review
- **Survey of operators** (nationwide)
- Hold **workshop of operators** focused on
  - Understanding context around survey responses,
  - Refine research questions
  - Initial development of conceptual models
- Prepare full research proposal for NSF submission

Advisory Committee - Partners:

- State Government Agency
- Researchers
- Water Utility Representatives (Small and Large)