**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Ormsbee, Lindell

eRA COMMONS USER NAME (credential, e.g., agency login): LINDELL.ORMSBEE

POSITION TITLE: Earl Parker Robinson Chair, UK Pigman College of Engineering

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

| INSTITUTION AND LOCATION | DEGREE *(if applicable)* | Completion Date MM/YYYY | FIELD OF STUDY |
|---|---|---|---|
| University of Kentucky | BSCE | 08/1978 | Civil Engineering |
| Virginia Tech | MSCE | 08/1979 | Civil Engineering |
| Purdue University | PhD | 08/1983 | Civil Engineering |

## Personal Statement

I have served as a faculty member in the Department of Civil Engineering for over 40 years. During that time, I have also served as the director of the Kentucky Water Resources Research Institute, the founding director of the Tracy Farmer Center for the Environment, the director of the Tracy Farmer Institute for Sustainability and Environment, the Director of the Kentucky Research Consortium for Energy and Environment, and the associate director of the University of Kentucky Superfund Research Center. In these roles, I have directly managed over $25 million dollars in externally funded research and participated in an additional $30 million in collaborative research associated with over 150 separate research grants. This research has resulted in over 400 technical publications including over 150 peer-reviewed journal articles, proceeding papers, or reports.

From 1983 to 2000, I partnered with Dr. Don Wood at the University of Kentucky in translating water distribution system research (including water quality) into an internationally successful commercial software package (KYPIPE). During that same time, I taught over 150 workshops and short courses dealing with KYPIPE applications, ultimately training thousands of students and engineers. These efforts have led to the application of water distribution system research to thousands of water distribution systems both in the US and around the world. From 2003-2009 I served as director of the Kentucky Research Consortium for Energy and Environment and oversaw an $8 million research portfolio that included 26 projects that focused on various environmental issues associated with the cleanup of Kentucky's largest superfund site, the Paducah Gaseous Diffusion Plant (PGDP). One of the most significant projects was a three-year stakeholder engagement project which integrated methods from Community-Based Participation and Structured Public Involvement in identifying community preferences for a future vision for the PGDP.

As director of the Kentucky Water Resources Research Institute, we employed this same stakeholder engagement process to address water supply issues in central Kentucky and watershed management priorities in the Floyds Fork Watershed near Louisville. Over the last seven years, we have expanded the use of this protocol in numerous communities in eastern Kentucky that are dealing with challenges associated with failing water and wastewater infrastructure. To date, we have conducted over 10 regional workshops involving over 50 water and wastewater utilities in Appalachia and provided on-site technical assistance to over 10 utilities in the same area.

**Positions and Employment**

1979-1981 Project Engineer, Howard K. Bell Consulting Engineers
1983-1989 Assistant Professor of Civil Engineering, University of Kentucky, Lexington, KY
1989-1996 Associate Professor of Civil Engineering, University of Kentucky, Lexington, KY
1995-1996 Associate Director, Kentucky Water Resources Research Institute
1996-2003 Full Professor of Civil Engineering, University of Kentucky, Lexington, KY
1997-1998 Visiting Researcher - Kentucky Environmental Protection Agency
1998-1999 Acting Director, Kentucky Water Resources Research Institute
1999-2001 Associate Director, Kentucky Water Resources Research Institute
2001-2002 Founding Director, Tracy Farmer Center for the Environment
1999-2003 Kentucky River Basin Coordinator, Kentucky River Authority
2003-2009 Director, Kentucky Research Consortium for Energy, and the Environment
2005-2020 Director, Research Translation Core, UK SRC, University of Kentucky, Lexington, KY
2010-2020 Associate Director, UK Superfund Research Center, University of Kentucky, KY
2010-2022 Director, Kentucky Center of Excellence for Watershed Management
2018-2021 Executive Director, Tracy Farmer Institute for Sustainability, and the Environment
2004-2022 Director, Kentucky Water Resources Research Institute
2003-2023 Raymond Blythe Endowed Professor of Civil Engineering
2023-present Earl Parker Robinson Chair, UK Pigman College of Engineering

**Synergistic Activities**

1983-2000 Associate Developer of KYPIPE software for water distribution modeling
1997-1998 President, Kentucky Section of ASCE
2002-2003 Chair, Nuclear Subcommittee of the Governor's Energy Policy Advisory Board
2004-2005 Member, Governor's Task Force on Blackwater Issues
2004-2007 Chair, Kentucky Environmental Quality Commission
2005-2006 Chair ASCE, EWRI Emerging and Innovative Technologies Council
2005-2006 Vice President, American Institute of Hydrology
2018-2022 Chair, ASCE, EWRI Subcommittee on Water Distribution Research Database
2018-present Member, KYDOW Drinking Water, and Clean Water Advisory Workgroup
2018-present Member, Governor's Task Force on Martin County Water Infrastructure
2020-present Technical Consultant, Kentucky Division of Compliance Assistance

**Professional Certification**

Professional Engineer, State of Kentucky, #21484
Professional Hydrologist, American Institute of Hydrology, #1552
Diplomate, American Academy of Water Resource Engineers, #172

**Honors and Awards**

2005 Diplomate Member: American Academy of Water Resource Engineers
2008 KY ASCE Robert Gilliam Award for Outstanding Service to the Civil Engineering Profession
2008 Fellow of the American Society of Civil Engineers
2010 ASCE EWRI Service to the Profession Award
2012 KY ASCE Outstanding Educator
2013 G.V. Loganathan Memorial Lecture, Virginia Tech
2014 Virginia Tech Civil Engineering Academy of Distinguished Alumni
2014 Fellow of the Environmental and Water Resources Institute
2014 Outstanding Senior Research Faculty, UK College of Engineering
2016 ASCE Julian Hinds Award (top ASCE award in the field of water resources)
2022 Outstanding Senior Service Faculty, UK College of Engineering
2022 Bill Barfield Award for Outstanding Contributions to Water Resources Research

**Recent Publications: Google Scholar Citations (4600, h-index 34; i10-index 75)**

- Ormsbee, L., Koyagi, E., McNeil, D., Shelly, J., Lucas, V. (2023) Kentucky Water and Wastewater Operators Workforce Survey, *Journal AWWA,* July 2023 https://doi.org/10.1002/awwa.2126
- McNeil, D., and Ormsbee, L., (2022) *Kentucky Wastewater Collection Operators Certification Manual*, Kentucky Division of Compliance Assistance, 351 pp.
- McNeil, D, and Ormsbee, L., (2021) *Kentucky Wastewater Treatment Plant Operator Certification Manual*, Kentucky Division of Compliance Assistance, 267 pp.
- Sharma, A., Dongre, S., Gupta, R., and Ormsbee, L. (2022), "Multiphase Procedure for District Metered Areas Identification in Water Distribution Networks Using Community Detection, NSGA-III Optimization and Multiple Attribute Decision Making, *ASCE Journal of Water Resources Planning and Management*, doi.org/10.1061/(ASCE)WR.1943-5452.0001586
- Lingireddy, S., Ormsbee, L., and Kamojjala, S., (2022) "How Slow is Slow? Managing fire hydrant operation for protecting water infrastructure," *AWWA Water Science*. doi.org/10.1002/aws2.1290
- Francisco, L., Vogler, R., Sandman, P., Harris, N., Ormsbee, L., Liu, C., Bhattacharyya, D. (2022) "Dual-Functional Nanofiltration and Adsorptive Membranes for PFAS and Organics Separation from Water", *American Chemical Society Journal*, 2(5), 863-872, doi.org/10.1021/acsestwater.2c00043 .
- Ormsbee, L., Hoagland, S., Hernandez. E., Hall, A., Ostfeld, A. (2022). "Hydraulic Model Database for Applied Water Distribution Systems Research, *ASCE Journal of Water Resources Planning and Management*, doi.org/10.1061/(ASCE)WR.1943-5452.0001559
- Hernandez, E., and Ormsbee, L., (2022) "A Heuristic for Strategic Valve Placement", *ASCE Journal of Water Resources Planning and Management*, 148(2) doi.org/10.1061(ASCE)WR.1943-5452.0001497.
- Hernandez, E., and Ormsbee, L., (2021) "Segment Based Assessment of the Consequences of Failure on Water Distribution Systems, *ASCE Journal of Water Resources Planning and Management*, 147(4), doi.org/10.1061/(ASCE)WR.1943-5452.0001340.
- Hernandez, E., and Ormsbee, L., (2021) "Segment Identification Procedure for Water Distribution Systems, *ASCE Journal of Water Resources Planning and Management*,147(5) doi.org/10.1061/(ASCE)WR.1943-5452.0001363.
- Walski, T., Grayman, W., Ormsbee, L., (2020) "Water Distribution System Modeling: Past and Present," *Journal AWWA*, doi.org/10.1002/awwa.1572
- Ormsbee, L., Hoagland, S., Peterson, K., (2020) "Limitations of TR-55 Curve Numbers for Urban Development Applications: Critical Review and Potential Strategies for Moving Forward, '*ASCE Journal of Hydrologic Engineering,"* https://doi.org/10.1061/(ASCE)HE.1943-5584.0001885.
- Saad A, Mills R, Wan H, Ormsbee LE, Bhattacharyya D. (2020). Thermo-responsive PNIPAm-PMMA functionalized PVDF membranes with reactive Fe-Pd nanoparticles for PCB degradation. *Ind Eng Chem Res* 59(38):16614-16625. doi:10.1021/acs.iecr.0c03260.
- Wan H, Islam MS, Qian D, Ormsbee LE, Bhattacharyya D. (2020). Reductive degradation of CCl4 by sulfizied Fe and Pd-Fe nanoparticles: Kinetics, longevity, and morphology aspects. *Chemical Engineering Journal*. 394:125013, doi.org/10.1016/j.cej.2020.125013 NIHMSID: 158320711.
- Aher A, Nickerson T, Jordan C, Thorpe F, Hatakeyama E, Ormsbee LE, Majumder M, Bhattacharyya D. (2020) Ion and organic transport in graphene oxide membranes: Model development to difficult water remediation applications. *J. Mem. Sci*. 2020 604:118024. doi:10.1016/j.memsci.2020.118024
- Hoover, AG, Koempel, A, Christian WJ, Tumlin, KI, Pennell, K.G., Evans, S., McAlister, M., Ormsbee, L.O., and Brewer, D. (2020). Appalachian environmental health literacy: building knowledge and skills to protect health. *Journal of Appalachian Health*, 2(1), 47-53. DOI: https//doi.org/10.13023/jah.0201.06
- Ormsbee, L., Kipp, J., Hoover, A., (2014) "Stakeholder Engagement in Public Natural Resource Management," *Proceedings, iEMS*, San Diego, CA, July 15-19, 2014.
- Ormsbee, L. (2014, June). Floyds Fork Watershed Stakeholder Engagement Model. *Proceedings EWRI 2014 World Environmental and Water Resources Congress*, ASCE, Portland, OR.

**Patents**

- Title: DEVICES AND METHODS FOR REMOVING PERFLUORINATED COMPOUNDS FROM CONTAMINATED WATER U.S. Utility Patent: 11,660,574 B2, May 30, 2023; Author (or assignee): Bhattacharyya, Saad, Mills, Mottaleb, Ormsbee.