GOV. MSG. NO. 554

1. Roger Babcock Jr.

2. Education:

Ph.D. Civil Engineering, University of California Los Angeles, Los Angeles, CA M.S. Civil & Environmental Engineering, California Polytechnic State University, San Luis Obispo, CA (1989)

B.S. Civil Engineering, University of California Davis, Davis, CA



3. Academic experience:

Technical University of Berlin, Berlin, Germany, Visiting Scholar, 1/94-5/94, full time UCLA, Los Angeles, CA, Civil Engineering Department, Lecturer, 9/94-8/95, 50% time University of Hawaii at Manoa, Assistant Professor, 1995-2000 University of Hawaii at Manoa, Associate Professor, 2000-present University of Hawaii at Manoa, Graduate Program Chair, 2009-present

4. Non-academic experience:

John Carollo Engineers, Walnut Creek, CA, Project Engineer, Designed water and wastewater treatment plants, 1992-1993, full-time

5. Certifications or professional registrations:

California, Civil PE# 51325 Hawaii, Civil PE# 12133

6. Current membership in professional organizations:

American Society of Civil Engineers (ASCE) Engineers Without Borders (EWB-USA), Water Environment Federation (WEF) Hawaii Water Environment Association (HWEA)

7. Honors and awards:

ASCE Student Chapter Faculty Advisor Award, 2002

ASCE Student Chapter Letter of Honorable Mention, 2002

ASCE Faculty Advisor Certificate of Commendation, 2003

ASCE Faculty Advisor Certificate of Commendation, 2004

Manoa Sustainabilty Teaching Award, 2006

ASCE Student Chapter Letter of Significant Improvement, 2006

ASCE Faculty Advisor Certificate of Commendation, 2008

ASCE Hawaii Section, Outstanding Civil Engineering Achievement Award, Best

Study/Research Project, 2009

Hi Chang Chai Excellence in Teaching Award, 2009

ASCE Student Chapter Letter of Honorable Mention, 2013

Order of the Engineer, Outstanding Link Coordinator, 2014

Hi Chang Chai Excellence in Teaching Award, 2015

8. Service activities:

- a) Appointed Member, Elected Chair, State of Hawaii, Board of Certification of Operating Personnel in Wastewater Treatment Plants, 1997-2003; 2011-2015
- b) Chair, Research Committee, HWEA, 1998-present
- c) Member, UH Manoa Faculty Senate, 2001-2002
- d) President, College of Engineering Faculty Senate, 2006-2007
- e) Chair, UH Manoa General Education Ethics Board, 2005-2007
- f) Faculty Advisor, ASCE Student Chapter, 2001-2003, 2005-present
- g) Member, UH Manoa Graduate Council, 2006-2012
- h) Member, UH Ethics Committee, Office of Research Compliance, 2008-present
- i) Secretary, Engineers Without Borders-USA, Honolulu Chapter, 2007-2008
- j) Treasurer, Secretary, Vice-President, President Elect, President, Past President, ASCE Hawaii Section, 2006-2012
- k) Member, ASCE Environment and Water Resources Institute, Congress Committee, 2007-2009
- 1) Technical Program Chair, EWRI World Congress, 2008
- m) Technical Program Co-Chair, EWRI World Congress, 2009
- n) Director, HI Statewide Wastewater Operator Training Center, 2010-present
- o) Reviewed papers for conferences and refereed journals

9. Most important publications of last five years:

- Lamichhane K and Babcock R W Jr (2012) An economic appraisal of using source separation of human urine to contain and treat endocrine disrupters in the USA. J Environ. Monitoring 14: 2557-2565.
- Lamichhane K, **Babcock R W Jr**, Turnbull S J, and Schenck S (2012) Molasses enhanced phyto and bioremediation treatability study of explosives contaminated Hawaiian soils. <u>J. Hazard. Mater.</u> **243:** 334-339.
- Lamichhane K and Babcock R W Jr (2013) Survey of attitudes and perceptions of urine-diverting toilets and human waste recycling in Hawaii. Sci. of Total Environ. 443: 749-756.
- Payne Z M, Lamichhane K, Babcock R W Jr, and Turnbull S J (2013) Pilot-scale in-situ bioremediation of HMX and RDX in soil pore water in Hawaii. J. Environ. Sci.: Process Impacts. 15 (11): 2023-2029
- Huang T, Jia R, Xia S, and **Babcock R W Jr** (2014) Effect of various parameters on microbial communities in membrane bioreactors treating municipal wastewater. <u>Frensius Environ. Bul.</u> **23(4):** 976-985.
- Li Y and **Babcock R W Jr**, (2014) Green roof hydrologic performance and modeling: A review. <u>Wat. Sci. Tech.</u> 69 (4): 727-738.
- Li Y and Babcock R W Jr, (2014) Green roofs against pollution and climate change. A review. Agron. Sustain. Dev. 34 (4): 695-705.
- Babcock R W Jr, Lamichhane K M, Cummings M J, and Cheong G H (2014) Condition Assessment Survey of Onsite Sewage Disposal Systems (OSDS) in Hawaii. Wat. Sci. Tech. 70 (6): 1083-1089.

Babcock, R W Jr and Xu-Sadri He (February 2012) Comparison of the bacterial community in MBRs and other systems. Presented at the 34th Annual Hawaii Water Environment Association Conference, Honolulu, Hawaii.

Babcock, R W Jr, Arakaki G and Okino K (February 2012) Satellite reclamation of wastewater to irrigate large sites in metro Honolulu. Presented at the 34th Annual Hawaii Water Environment Association Conference, Honolulu, Hawaii.

Babcock, R W Jr, (July 2013) Study of green roofs to develop optimized design tools and accurate predictions of water uptake in order to reduce urban runoff. Presented at the Tokyo Metropolitan University, Civil & Environmental Engineering Dept., Seminar Series, Tokyo, Japan.

Babcock, R W Jr (May 2014) Experimental evaluation of 3 locally available ATUs. Presented at the 2014 Hawaii Water Conference, Honolulu, Hawaii.

Lamichhane K, Furukawa D, Tulang D, Mansfield L, **Babcock R W Jr** and Cooney M (May 2014) Hybrid anaerobic-aerobic digestion: Application on primary clarifier effluent at demonstration scale. Presented at the 2014 Hawaii Water Conference, Honolulu, Hawaii.