

CURRICULUM VITAE

JERRY E. ONGERTH

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EDUCATION

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| 1968-1973 | University of Michigan, Ann Arbor, PhD (Civil-Sanitary Engineering) |
| 1965-1966 | University of Michigan, MS (Civil-Sanitary Engineering) |
| 1960-1965 | University of California, Berkeley. BS (Civil Engineering) |

PROFESSIONAL POSITIONS

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| 2006-Present | Principal Honorary Fellow , Environmental Engineering, School of Civil Mining & Environmental Engineering, University of Wollongong |
| 2002-2006 | Manager, Regulatory Planning & Analysis , Office of Water Quality, East Bay Municipal Utility District, Oakland, California; |
| 1995-2002 | Associate Professor & Visiting Fellow , School of Civil & Environ. Engineering, University of New South Wales, Sydney, NSW Affiliate Professor , Department of Civil Engineering, University of Washington, Seattle, Washington |
| 1991-1996 | Associate Professor , Department of Environmental Health, School of Public Health; Adjunct Associate Professor , Dept. of Civil Engineering, University of Washington, Seattle, Washington |
| July-Nov.'92 | Visiting Fellow , Public Health Engineering, Dept. of Civil Engineering, University College London, London, England. |
| 1984-1991 | Assistant Professor , Department of Environmental Health, University of Washington, Seattle, Washington |
| 1976-1984 | Principal Engineer , Brown and Caldwell, Consulting Engineers, Seattle, Washington; Sacramento, California |
| 1973-1976 | Assistant Professor and Research Engineer , Department of Civil and Environmental Engineering, Washington State University. |

FELLOWSHIPS, AWARDS, HONORS

Visiting Fellow, Chadwick Public Health Engineering Laboratory, University College London, Science and Engineering Research Council, London, England.
AWWA, Water Quality Division Best Paper Awards for: "Giardia & Cryptosporidium Removal by...Filtration" JAWWA 87(9):96-106 (1996).
"Evaluation of Treatment for Removing Giardia Cysts." JAWWA 82: 85-96 (1990).
National Association of Counties "County Point of Light" for Service to King County as Chair of the Cedar Hills Citizens Review Committee 1986-95. Awarded, 9.14.91
(Diplomat, American Academy of Environmental Engineers, Certified March, 1988)
Chi Epsilon, Civil Engineering Honorary Society
Doctoral Student Traineeship, National Science Foundation, 1968-1972

REGISTRATION

Registered Civil Engineer 16540, Washington, 1974.
Registered Civil Engineer 17838, Michigan, 1969
Registered Civil Engineer, 26789, California, 1976

PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers, Fellow
American Water Works Association, Life Member

PROFESSIONAL ACTIVITIES

Invited Speaker--“Integrated Water Management in Australia” UN-HABITAT International Seminar on Urban Catchments Management, Nanjing, PR China, 11.29-12.2.07
Principal Investigator--Coordinated studies of Pharmaceutical Residuals, Origin, Fate, & Environmental Distribution; Australia, Germany, & USA. UNSW, \$50,000. ‘98-‘02
Principal Investigator—Transport and Fate of Surface Water Pathogens in Watersheds, AWWARF-\$950,000., 1.2.01 to 1.8.04
Principal Investigator--Coordinated studies of Cryptosporidium in Water and Water Treatment. AWS, \$250,000, 8-12.98
Consultant to Sydney Water Inquiry--Cryptosporidium Issues, NSW Premiers Department, 8-12.98.
Principal Investigator--Disinfection for Reuse of Wastewater in Cooling; \$19,000 for CRC for Waste Management & Pollution Control, 6 to 10.98.
Principal Investigator--Chlorine Disinfection of Treated Sewage--A Critical Assessment. \$75,000 for CRC for Waste Management & Pollution Control, 2.98 to 7.98.
Principal Investigator--Cryptosporidium in Water and Water Treatment. \$70,000, NSW DLWC Urban Water Directorate, 1.97 to 9.98.
Principal Investigator--Health Effects of Wastewater Reuse for Public Water Supply. \$15,000, for NSW Department of Health. 7.96 to 8.97.
Principal Investigator--Evaluation of DE filtration for removal of Cryptosporidium & Giardia. \$200,000, for the International Diatomite Producers Assn, 2.96 to 6.98.
Co-Investigator--Definition of research needs and evaluation of research processes. Sydney Water Corporation, \$15,000, 8.95 to 2.96.
Research Fellow, University College London--Investigation of the Significance of Cryptosporidium in Water. SERC, England, \$40,000., 6/92 to 12/92.
Principal Investigator for research on control of Cryptosporidium and Giardia in water by Ozonation and by Filtration. Tacoma Water Division, \$50,000. 6/93 to 6/94.
Principal Investigator for research on the occurrence and significance of Giardia and Cryptosporidium in water. Seattle Water Department, \$50,000. 6/92 to 6/94.
Principal Investigator for research on "Identification and Control of G. lamblia in Drinking Water; 2/1/91 through 1/31/96, \$506,700 NIH-NIAID R01AI28110-01A2 (TMP).
Co-Project Director for research on the Advanced Biological Treatment Technology to Reduce Health Risk of Halogenated Organic Contaminants Project, 1988 to 1992, \$230,000/year. NIH-NIEHS Superfund Basic Research Program.
Principal Investigator for research on application of rRNA typing of bacteria for tracing sources of contamination in commercial shellfish beds. Washington Sea Grant Program, 4/90-4/91, \$54,971.

Principal Investigator for research on the concentration and origin of Giardia lamblia cysts in three major rivers from watersheds in western Washington. Sponsored by the cities of Tacoma and Seattle, Washington; \$160,000, 7/1/86 to 6/30/90.

Principal Investigator for research on the emission of trace hazardous components in gas and leachate from municipal landfills. With the City of Seattle, 1985 to 1987.

Representative Consulting Projects

Consultant Advisor: New South Wales Inquiry re. Sydney Water Contamination Incident. August, 1988 to 2002.

Consultant: AWS re. analysis of Cryptosporidium and Giardia in Water and Pilot Plant Evaluation of Treatment Performance. August to December, 1998

Peer Review Consultant: Sydney Water Corporation. Operational Monitoring Plan for Cryptosporidium and Giardia. 1997-1998.

Peer Review Consultant: Sydney Water Corporation. Emergency evaluation of potential water system contamination by protozoan parasites, 1996-1998.

Strategic Planning Advisor: East Bay Municipal Utility District, Oakland, California, for Watershed Management Plan Development, 1995-1999.

Planning Advisor: NSW Department of Health, for development of a program for public water supply oversight. December, 1994 to present.

Expert Panel Member: USEPA, for identification of research needs for monitoring of Cryptosporidium in water, September 11-12, 1995

Expert Panel Member: AWWA Res. Foundation Project to define the epidemiology of waterborne cryptosporidiosis, 1994-95.

Consultant: Seattle/Tacoma Water Depts--Giardia and Cryptosporidium Evaluations, 94-5

Advisory Committee: Removal of Giardia and Cryptosporidium in direct filtration and in complete treatment of water. Utah Dept. of the Environment, USEPA, 9/91-12/93

Advisory Committee: Study of Giardia and Cryptosporidium removal in water filtration. Montgomery Engineers, Portland Water Bureau, AWWA-RF, 9/91-6/94

Advisory Committee: Tolt water filtration plant design study, Montgomery Engineers, Seattle Water Department, June, 1991 to June 1994

Expert Panel Member: Seattle Water Department, Evaluation of Secondary Uses of the Cedar R. Watershed, 1990-91.

Consultant to Tacoma, WA (with HDR Engrs) for health risk assessment of reusing treated municipal wastewater effluent for process applications in a paper mill, 1990

Consultant to Pierce Co., WA (with Brown and Caldwell Engrs.) for health risk assessment of municipal sewage sludge disposal to land, 1987

Co-chair of expert panel for evaluation of health risk associated with recreational use of the Gas Works Park hazardous waste site. Appointed by the Mayor, Seattle, WA, 1984-5

Committees

State of Washington, Department of Health

Water Supply Advisory Committee, four terms, 1984-1996

American Water Works Association

National Committee on Organisms in Water, 1989-present.

National Committee on Watershed Water Quality-2004-present

American Society of Civil Engineers

National Committee on Toxic Substances in Water, Chairman, 1975-1976.

Technical Presentations

- Cryptosporidium Removal in Diatomaceous Earth Filtration--Six Logs! AWWA WQTC, San Diego, California, 4 November 1998.
- Giardia. In "Do Cysts and Oocysts Exist?" **Invited Keynote address**. AOAC Seminar, Montreal, Canada, 14-15 September 1998.
- Measuring Water Treatment Removal of Giardia and Cryptosporidium. **Invited Seminar**, Scottish Parasite Diagnostic Lab., Univ. of Glasgow, Glasgow, Scotland, 2 Oct. 1994
- Detection and Significance of Giardia and Cryptosporidium in Sources of Public Water Supply, **Invited Seminar**, Melbourne Water Board and Victoria State Health Department, Melbourne, Victoria, Australia. August 24, 1993.
- Occurrence and Control of Protozoan Parasites in Water, Public Health Engineering Seminar, University College London. October 27, 1992.
- Giardia and Cryptosporidium in Public Water Supplies--Monitoring and Regulatory Issues. **Invited Seminar**, Water Research Center, Medmenham, England, Oct. 30, 1992
- Water Utility Planning for Giardia and Cryptosporidium in Water. **Invited Seminar**, Wahnachtalsperrenverband, Siegburg, Germany, November 6, 1992.
- Research and Planning for Control of Giardia and Cryptosporidium in Public Water Supplies. **Invited Presentation** to: Cryptosporidium Research Planning Group, Drinking Water Inspectorate, Department of the Environment, England. November 10, 1992
- Giardia and Cryptosporidium in Water--Occurrence, Significance, and Control. **Invited Seminar** and Project Planning, Israel Ministry of Health, Israel Water Commission, Mekoroth Water Commission, Tel Aviv, Israel, 12/2/92
- Public Water Supply Aspects of Giardia and Cryptosporidium. **Invited presentation**. University of California, Department of Civil Engineering, Berkeley, April 15, 1991.

COMMUNITY SERVICE

- Member**, New South Wales Department of Health Expert Advisory Panel on Cryptosporidium and Giardia in Public Water Supply. August, 1998 to 2005
- Chairman**, Cedar Hills Citizens Review Committee, To assure communication between landfill area residents and the King Co. Solid Waste Division. Appointed by King County Superior Court, 1986 to 1995.
- Member**, Seattle Water Department Water Supply Plan Policy Advisory Committee. Expert on public health-related issues. September, 1989 to 1993.
- Vice-Chair**, Advisory Committee to the Seattle Water Department for a Study of Secondary Uses in the Cedar River Watershed, January, 1987 to June, 1988.
- Co-Chair**, Advisory Panel on Health Risks of Gas Works Park, for Charles Royer, Mayor of Seattle, WA. April, 1984 to August, 1984.

REPRESENTATIVE PUBLICATIONS

(60 total refereed publications. Web of Science h-index=24)

1. **Ongerth, Jerry E**, 2013. ICR SS Protozoan Data Site-by-Site-A Picture of *Cryptosporidium* & *Giardia* in USA Surface Water. Environ. Sci. Technol. 47(18):10145–10154 (<http://dx.doi.org/10.1021/es4027503>).
2. **Ongerth, Jerry E.**, 2013. The concentration of *Cryptosporidium* and *Giardia* in Water--The role and importance of Recovery Efficiency. Water Research, 47(7):2479-2488. (<http://dx.doi.org/10.1016/j.watres.2013.02.015>)

3. **Ongerth, Jerry E.**, 2013. The LT2 *Cryptosporidium* data...What do they tell us about *Cryptosporidium* in surface water in the USA? *Environ. Sci. Technol.* 47(9): 4029–4038. (<http://dx.doi.org/10.1021/es4006509>)
4. **Ongerth, Jerry E.**, and Saaed, Frhat MA, 2012. Distribution of *Cryptosporidium* oocysts and *Giardia* cysts in water above and below the normal limit of detection. *Parasitol Res.* On-line, <http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s00436-012-3155-8>, October 14, 2012
5. Karanis, P., Eiji, T., Palomo, L., Boonrod, K., Plutzer, J., **Ongerth, J.**, Igarashi, I., 2010. First description of *C. bovis* in Japan and diagnosis and genotyping of *Cryptosporidium* spp. in diarrheic pre-weaned calves in Hokkaido. *Veterinary Parasitology*, 169: 387-390
6. Karanis, P. and **J. Ongerth** (2009). LAMP-a powerful and flexible tool for monitoring microbial pathogens. *Trends Parasitol.* 25(11):498-99. 11/09.
7. Bakheit, M.A., Torra D, Palomino L, Thekisoe O, Mbatia P, **Ongerth J.**, and Karanis P, (2008). Sensitive and specific detection of *Cryptosporidium* species in PCR negative samples by loop-mediated isothermal DNA amplification and confirmation of generated LAMP products by sequencing. *Vet. Parasitol.*, 158(1-2):11-22. 11/25/08
8. Burenbaatar B, Bakheit MA, Plutzer J, Suzuki N, Igarashi I, **Ongerth JE.**, and Karanis P, 2007. Prevalence and genotyping of *Cryptosporidium* species from farm animals in Mongolia. *Parasitol. Res.* 102(5):901-905.
9. Leitz AS, Sotiriadou I, **Ongerth J.**, Karanis P., 2007. An evaluation of primers amplifying DNA targets for the detection of *Cryptosporidium* spp. Using *C. parvum* HNJ-1 Japanese isolate in water samples. *Parasitol Res.* 101(4):951-962.
10. Karanis P, Thekisoe O, Kiouptsi K, **Ongerth J.**, Igarashi I, Inoue, N., 2007. Development and preliminary evaluation of loop-mediated isothermal amplification (LAMP) for sensitive detection of *Cryptosporidium* oocysts in faecal and water samples. *Appl Environ Microbiol.* 73 (9) No. 17, 5660-5662
11. Khan, S. J. and , **JE Ongerth***, (2005) Occurrence and removal of pharmaceuticals at an Australian sewage treatment plant. *Water*, 32(4), 80-85.
12. Khan, S, and **JE Ongerth***, 2004. Modelling of pharmaceutical residues in Australian sewage by quantities of use and fugacity calculations. *Chemosphere* 54: 355 -367.
13. **Ongerth, JE.**, and S. Khan, 2004. Drug residuals: How xenobiotics can affect water supply sources. *J. Am. Water Wks. Assoc.* 96(5):94-101.
14. Blasdall, S; NJ Ashbolt, and **JE Ongerth**, 2002. Sub-species typing among bovine *C. parvum* isolates by PCR-PAGE using a novel microsatellite + telomere primer scheme. *Water Supply* 2(3): 81-87, August, 2002
15. Khan, S, and JE Ongerth, 2002. Estimation of pharmaceutical residues in primary and secondary sewage sludge based on quantities of use and fugacity modelling. *Wat Sci Technol*, 46(3):105-113, August, 2002
16. **Ongerth, JE** and PE Hutton, 2001. Pilot-scale testing of diatomaceous earth filtration for removal of *Cryptosporidium* oocysts. *J. Am. Water Wks. Assoc.* 93(12):54-63, 12/01.
17. **Ongerth, J.E.** & P. E. Hutton. 1997. DE Filtration to remove *Cryptosporidium*. *J. Am. Water Wks. Assn.*, 89(12)39-46
18. **Ongerth, J.E.**, and Pecoraro, J., 1996. Electrophoretic Mobility of *Cryptosporidium* oocysts and *Giardia* cysts. Accepted by *J. Environ. Engr.*, 122(3):228-230.
19. Ragle, N., Kissel, J., **Ongerth, J.E.**, & DeWalle, F.B., 1995. Composition and variability of leachate from selected municipal landfill area. *Water Env. Res.*, 67(2):238-243.
20. **Ongerth, J.E.**, and Pecoraro (Proctor), J., 1995. Removal of *Cryptosporidium* in rapid sand filtration. *J. Am. Water Wks. Assn.*, 87(12)83-89.
21. Nieminski, E.C., and **Ongerth, J.E.**, 1995. *Giardia* and *Cryptosporidium* removal by direct filtration and conventional treatment. *J. Am. Water Wks. Assoc.*, 87(9)96-106.