

DOUGLAS D. WALKER, PhD, PH

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PROFESSIONAL HISTORY

2010 to date: Water, Energy, Agriculture and Mining Technical Advisor (Desk Officer), Afghanistan and Pakistan Desks, U.S. Department of State, Washington, DC.

2008 to 2010: Hydrologist, Illinois State Water Survey, University of Illinois, Champaign, Illinois.

2001 to 2008: Associate Hydrologist, Illinois State Water Survey, Champaign, Illinois.

2001 to date: President, Watermark Group, Inc., Champaign, Illinois.

1994 to 2001: Groundwater Hydrologist, INTERA – Duke Engineering, Albuquerque, New Mexico; 1996 to 1998 assigned to INTERA KB while stationed in Stockholm, Sweden.

1991 to 1994: Graduate Research Assistant, Colorado State University, Ft. Collins, Colorado.

1988 to 1991: Hydrogeologist, Harza Environmental Services, Chicago, Illinois.

1986 to 1987: Technical English Instructor, International Ed. Services, Tokyo, Japan.

1984 to 1986: Graduate Research Assistant, Colorado State University, Ft. Collins, Colorado.

1980 to 1983: Student Co-op: Soil Conservation, Soil Conservation Service, US Dept. Ag., Colorado.

EDUCATION

PhD, Agricultural Engineering, Colorado State University, Ft. Collins, Colorado, 1994.

MS, Civil Engineering, Colorado State University, Ft. Collins, Colorado, 1986.

BS, Watershed Science, Colorado State University, Ft. Collins, Colorado, 1983.

SERVICE

Groundwater Technical Committee, American Geophysical Union, 2006 to 2010.

Associate Editor, *Ground Water*, 2002 to 2010.

Ad hoc Reviewer, *Water Resources Research*, *J. Hydrology*, *Hydrogeology J.*, *Adv. Water Resources*, National Science Foundation, National Institutes of Water Resources.

Chair and Planning Committee Member for various professional / scientific conferences, Geol. Soc. America, American Geophysical Union, *American Society of Civil Eng*, 2003 to 2010.

Member, American Geophysical Union; National Groundwater Association; American Institute of Hydrology; Illinois State Academy of Sciences.

Supervisor: Governmental Liaison, Disaster Services, American Red Cross, 2001 to 2010.

EXPERIENCE: International Policy and Development

- 2011 to date:* Develop Afghanistan-Pakistan transboundary water policy. For U.S. Department of State.
- 2010 to date:* Track, facilitate, and advise on water, energy, mining, and agriculture issues in Afghanistan. For U.S. Department of State.
- 2010 to date:* Track, facilitate, and advise on water issues in Pakistan. For U.S. Department of State.
- 2008:* Developed program for assessment of water risks for global operations of Fortune 100 corporation. For ISWS.

EXPERIENCE: Management and Administration

- 2001 to 2010:* As Principal Investigator and Co-Principal Investigator, developed and conducted externally funded research program, including supervision of research assistants. For ISWS.
- 2001 to 2010:* As Technical Lead for groundwater modeling, developed collaboration and data exchange with agencies, institutions, and NGO's; trained, scheduled, and supervised hourly and graduate assistants; formal mentor to entry-level scientists. For ISWS.
- 2007 to 2010:* Managed internal reviews for Center for Groundwater Science. For ISWS.
- 2006 to 2010:* Liaison to local units of government for disaster preparedness and disaster relief. For American Red Cross, Central Illinois Chapter.
- 2008:* As deputy manager, coordinated governmental liaisons. For American Red Cross, Hurricane Gustav Disaster Relief.
- 2005:* As deputy manager, trained and supervised client outreach teams (approx. 200 workers). For American Red Cross, Hurricanes Katrina/Rita Disaster Relief.
- 2001:* Promoted to Assistant Group Manager. For Duke Eng.
- 1996 to 1998:* As Technical Lead for hydrogeologic modeling, coordinated groundwater flow modeling in support of in performance assessments of four repository sites in Sweden for spent nuclear fuel; For INTERA KB – Duke Eng.
- 1994 to 2001:* Managed multiple hydrogeologic studies and software development projects, \$10,000 to \$200,000 /year. For INTERA-Duke Eng.
- 1991 to 1994:* Trained, scheduled, and supervised hourly assistants. For Colorado State U.
- 1988 to 1991:* As field hydrogeologist at sites in Illinois, Indiana, and New York, directed subcontractors for drilling/geophysical logging; monitored health and safety. For Harza.
- 1986 to 1987:* Orientated and evaluated instructors. For International Ed. Services, Tokyo, Japan.

EXPERIENCE: Quantitative Hydrogeology

- 2010:* Member of External Review Panel for studies of subsurface contamination due to nuclear weapons testing at the Nevada Test Site. For Watermark Group.
- 2001 to 2010:* Conducted statistical and hydrologic analyses in support of water resource management; developed and conducted externally-funded research on hydraulic testing in fractured media, incl. mathematical development, numerical programming, peer-reviewed publication. For ISWS.
- 1998 to 2001:* Analyzed geochemistry of spent nuclear fuel waste packages via geochemical reaction path modeling (EQ3/6). Evaluated hydrodynamic dispersion in heterogeneous media via geostatistical simulation and numerical modeling of solute transport. For Duke Eng.

- 1996 to 1998:* Coordinated groundwater flow modeling in support of in performance assessments of four repository sites in Sweden for spent nuclear fuel; conducted geostatistical analysis and modeling of hydraulic test data including scale effects and integrating data with numerical models; tested and verified HYDRASTAR (stochastic inverse model for groundwater flow and transport). For INTERA – Duke Eng.
- 1996:* Enhanced, tested, and documented GRASP-INV (inverse flow and transport model); TOUGH28W (multiphase nonisothermal flow model). For Duke Eng.
- 1995 to 1996:* Co-developed software to optimize borehole locations for subsurface sampling, including Monte Carlo analysis of interconnected numerical and analytical models of groundwater flow, transport and VOC migration through unsaturated and saturated zones. For INTERA – Duke Eng.
- 1994:* Conducted geostatistical analysis in support of performance assessment of the U.S. DOE Waste Isolation Pilot Plant. For INTERA.
- 1991 to 1994:* Investigated alternative methods for geostatistical analysis of nonideal data, including field and lab studies for soil properties and infiltration. Developed an innovative method for nonparametric spatial estimation. For Colorado State U.
- 1988 to 1991:* Developed and applied groundwater flow and transport models in support of hydrogeologic studies and regulatory compliance in a variety of geologic settings. Planned, conducted and analyzed data from field studies for site/aquifer characterization, drilling, sampling, and monitoring well installation; supervised geophysical, and soil gas surveys; logged boreholes and collected samples for geotechnical and chemical analysis; conducted hydraulic tests; reduced, analyzed and reported field data. For Harza.
- 1984 to 1986:* Applied detailed finite element groundwater model to the operational management of a complex groundwater contamination containment barrier at the US Army’s Rocky Mountain Arsenal near Denver, Colorado. For Colorado State U.
- 1980 to 1983 (summers)* Measured well-flow rates and irrigation efficiency; conducted in-field resource surveys and construction inspection, at stations in Glenwood Springs, Center, and Ft. Collins, Colorado. For US. Dept of Ag – Soil Conservation Service.

EXPERIENCE: Instruction

- 2004 to present:* Graduate Committee and Thesis Co-advisor, for Dept. Civil and Env. Eng., U. Illinois.
- 2004 to 2006:* Faculty Advisor / Sailing Inst., for U. Illinois Sailing Club / US Sailing Assoc.
- 1990, 1996, 2005:* Short courses in groundwater modeling, for Harza Environmental Services; for INTERA / Environ. Ed. Enterprises; and for ISWS – U. Illinois at Urbana-Champaign.
- 1993:* Teaching Assistant, Nonpoint Source Pollution, for Colorado State U.
- 1986 to 1987:* English Instructor for Japanese engineers in technical English and presentation skills; Developed and edited teaching materials; Edited technical papers; for International Education Services, Tokyo, Japan.

HONORS

- Science and Technology Diplomacy Fellow, American Association for the Advancement of Science, Washington, DC, 2010-2011.
- Faculty Fellow, National Center for Supercomputing Applications, Champaign, Illinois, 2003-2004.
- Selectee, *Invest in Japan Study Program*, Japan External Trade Organization (JETRO), 1995.

PROFESSIONAL REGISTRATION

Professional Hydrologist 09-HGW-1918, American Institute of Hydrology.

SECURITY CLEARANCE

Top Secret / SCI

LANGUAGES

English; previously functional in Japanese, Swedish.

TRAINING

National Incident Management System IS-100, IS-200, IS-300, IS-400, IS-700, and IS-800, Federal Emergency Management Agency, 2006 to 2008.

Microsoft Access and Microsoft Project Management 2002, Levels I and II, U. Illinois, 2003.

Introduction to ArcGIS I, U. Illinois, 2003.

Geochemical Modeling with EQ3/6, Colorado School of Mines, 1999.

Introduction to Well Test Interpretation with Saphir, Phi Solutions, 1998.

Health and Safety Training Refresher Course for Haz. Waste Site Workers, U. Illinois, 1990.

Hazardous Waste Site Worker Supervisory Program, 1989.

General Hazardous Waste Site Worker Program, 1988.

HISTORY OF FUNDED RESEARCH

Science and Technology Diplomacy Fellowship, 100 percent annual salary (1 FTE), for Amer. Assoc. for the Advancement of Science, 2010-2011.

Water Supply Assessment for Kaskaskia River Watershed Development Phase I, \$265,000 / 1.5 year, co-Principal Investigator, for Illinois Clean Coal Inst., 2010-2011.

Exploring Discrete Fracture Network Models of Fractured Dolomite Aquifers, 100,000 Service Units / 2 years, Principal Investigator, for National Science Foundation – National Center for Supercomputing Applications TeraGrid partnership, 2007-2009.

Exploring Stochastic Models of Fractured Dolomite Aquifers, 110,000 Service Units / 1.5 year, Principal Investigator, for National Science Foundation – National Center for Supercomputing Applications TeraGrid partnership, 2005.

The Flow Dimension of Groundwater Resources in Northeastern Illinois, \$39,998 / 2 years, Principal Investigator, for Illinois Water Resources Center, 2005.

Identifying Models for the Heterogeneity of Hydraulic Conductivity, 46,000 Service Units / 1 year, Principal Investigator, for National Science Foundation – National Center for Supercomputing Applications TeraGrid partnership, 2005.

High-Throughput Computing for the Analysis of Tracer Tests in Fractured Aquifers, \$18,504 / 1 year, Principal Investigator, for Sandia National Laboratory, 2004.

High-Throughput Computing for the Analysis of Fractured Aquifers, \$16,000 / 1 year, Principal Investigator, for Faculty Fellows Program, National Center for Supercomputing App., 2003.

Application of Bacterial RiboPrinting to Water Quality Issues in the State of IL: A Workshop to Develop Joint ISSS-UIUC Research, \$3150 / 1 year, co-Principal Investigator, for IL Board of Higher Education, 2002.

Water-Resources Study of Kane County \$1.8 million / 5 years, co-author and Technical Lead, for Kane Co, Illinois, 2001.

Groundwater Modeling Software Development, \$10,000 / 1 year, Principal Investigator, for Harza Environmental Services, 1990.

PEER-REVIEWED PUBLICATIONS

Walker, D.D., X.-Z. Liang, and J. Zhu, in prep 2011. **Periodicity and relationships among water resources in the Lake Michigan region.** *Geophys. Res. Lett.*.

Walker, D.D., P. A. Cello, and B. Loftis, in prep for 2011. **Identifying Models for Aquifer Heterogeneity using the TeraGrid,** *Ground Water*.

Walker, D.D., S. Meyer, and P. Schuch. in prep for 2011. **Water Resources of Kane Co., IL: Building a Scientific Basis for Policy,** *Trans - Il State Academy of Sci.*

Schuch, P. and D. Walker, in review for 2011. **Water Resources of Kane Co., IL: Development and Policy,** *Trans - Il State Academy of Sci.*

Knapp, V. and D. Walker, in prep for 2011. **Water Resources of Kane Co., IL: Surface Water,** *Trans - Il State Academy of Sci.*

Locke, R., S. Meyer, D. Walker, and W. Dey, in revision for 2011. **Water Resources of Kane Co., IL: Aquifer Characterization,** *Trans - Il State Academy of Sci.*

Meyer, S. , Y-F. Lin, G. Roadcap, and D. Walker, in prep for 2011. **Water Resources of Kane Co., IL: Groundwater Modeling,** *Trans - Il State Academy of Sci.*

Singh, A., D. D. Walker, B. S. Minsker, and A. J. Valocchi, accepted for 2010. **Incorporating Stochasticity and Subjective Uncertainty in an Interactive Multi-Objective Groundwater Calibration Framework,** *Stoch. Env. Res. and Risk Assess.*, vol. 24, p881-898.

Cello, P. A., D. D. Walker, A. J. Valocchi, and B. Loftis, 2009. **Flow dimension and anomalous diffusion of aquifer tests in fracture networks,** *Vadose Zone J.*, vol. 8, no. 2, 258-268, DOI: 10.2136/vzj2008.0040

Walker, D. D., and R. M. Roberts, 2007. **Reply to Comment by Chia-Shyun Chen and I. Y. Liu on “Flow dimensions corresponding to hydrogeologic conditions”**, *Water Resources Research*, vol. 43, no. 2, W02602, doi:10.1029/2006WR005781.

Walker, D. D., P. A. Cello, A. J. Valocchi, and B. Loftis, 2006. **Flow dimensions corresponding to stochastic models of heterogeneous aquifers,** *Geophys. Research Letters*. vol. 33, no. 4, L07407, doi:10.1029/2006GL025695.

Walker, D. D., J. A. Wickenkamp, 2005. **Water Supply Planning in the Lake Michigan Region,** *Eos: Trans. Amer. Geophys. Union*, vol. 86, no. 31, p287.

Walker, D., B. Gylling, and J-O. Selroos, 2005. **Upscaling of Hydraulic Conductivity and Telescopic Mesh Refinement,** *Ground Water*, vol. 43, no. 1, p. 40-51.

Walker, D. D., and R. M. Roberts, 2003. **Flow dimensions corresponding to hydrogeologic conditions,** *Water Resources Research*, vol. 39, no. 12, 1349, doi: 10.1029/2002WR001511.

McKenna, S., D. Walker, and B. Arnold. 2003. **Modeling sub gridblock scale dispersion in three-dimensional heterogeneous fractured media**. *J. Contam. Hydrology* 62-63, p577-594.

Walker, D. D., S. C. Meyer, and D. Winstanley, 2003. **Uncertainty of estimates of groundwater yield for the Cambrian-Ordovician Aquifer in northeastern Illinois**, in: Proc. Groundwater Quality Modeling and Management Under Uncertainty, Am. Soc. Civil Eng., Env. and Water Resources Inst. Symposium, Philadelphia, PA, p 273-283.

Selroos, J-O., D. Walker, A. Ström, B. Gylling, and S. Follin, 2002. **Comparison of alternative modelling approaches for flow and transport in fractured rock**, *J. Hydrology*, vol. 257, 1-4, p.174-188.

Walker, D., B. Gylling, A. Ström, and J-O Selroos, 2001. **Hydrogeologic studies for nuclear waste disposal in Sweden**, *Hydrogeology Journal*, vol. 9, no. 5, p. 419-431.

Walker, D. D., and J. E. White, 2001. **Analytical solutions for transport in porous media from Gaussian source terms**, *Water Resources Research*, vol. 37, no. 3, p843-848.

Walker, D. D., J. C. Loftis, 1997. **Consequences of alternative geostatistical estimators**, *Ground Water*, vol. 35, no. 4, p. 593-601.

Walker, D. D., J. C. Loftis, P. M. Mielke, 1997. **Permutation methods for determining the significance of correlation**, *Mathematical Geology* vol. 29, no. 8, p. 1011-1024.

BOOK CHAPTERS / PROCEEDINGS

Singh, A., D. D. Walker, B. S. Minsker, and A. J. Valocchi, 2008. **Interactive Multi-Objective Inverse Groundwater Modelling – Incorporating Subjective Knowledge and Conceptual Uncertainty**, in: Proc. World Water & Environ. Resour. Cong. 2008, Hononlulu, HI. Am. Soc. of Civil Eng. Environ. & Water Resour. Inst. CD-ROM.

Singh, A., B. S. Minsker, A. Valocchi, and D. D. Walker, 2007. **Interactive Multi-objective Inverse Groundwater Modeling for the WIPP Site**, in: Proc. World Water & Environ. Resour. Cong. 2007, Tampa, FL. Am. Soc. of Civil Eng. Environ. & Water Resour. Inst. CD-ROM.

Wickenkamp, J. A., and D. D. Walker, editors, 2005. **Proceedings of Straddling the Divide: Water Supply Planning in the Lake Michigan Area**, NE Illinois Planning Com., Illinois Water Survey. URL: <http://www.nipc.org/environment/slmrwc/conferences/program.htm> (6/1/2005).

Bartosova, A., S. McConkey, Y-F. Lin, and D. D. Walker, 2004. **Using NHD to estimate stream geometry characteristics for MODFLOW**, in: Proc. Amer. Water Resour. Assoc. 2004 Spring Spec. Conf., May 19-19, 2004, Nashville, Tennessee.

Lin, Y-F., D. D. Walker and S. C. Meyer, 2003, **Groundwater Flow Models of Northeastern Illinois: a case study for building MODFLOW models with GIS**, in: Proc. *MODFLOW and More 2003* (Vol. II), IGWMC, Golden, CO, p. 863-867.

Walker, D. D., and R. M. Roberts, 2002. **Summary of Flow Dimensions Corresponding to Hydrogeologic Conditions**, in: Proc. *Bridging the Gap between Measurement and Modeling in Heterogeneous Media*, IAHR International Groundwater Symposium, Berkeley, California. CD-ROM.

Walker, D., and B. Gylling, 2001. **Upscaling of Hydraulic Conductivity in Hydrogeologic studies for nuclear waste disposal in Sweden**, in: Proc. *Fractured Rock 2001*, U.S. Environmental Protection Agency, Toronto, Ontario, Canada, March, 2001. CD-ROM.

Selroos, J-O and D. Walker, 2001. **Summary of a Comparison of Alternative Modelling Approaches for Flow and Transport in Fractured Rock**, in: Proc. *Fractured Rock 2001*, U.S. Environmental Protection Agency, Toronto, Ontario, Canada, March, 2001. CD-ROM.

- Walker, D., B. Gylling, A. Ström, and J-O Selroos, 2000. **Summary of hydrogeologic studies for nuclear waste disposal in Sweden**, *in Proc. Spectrum 2000 International Conf. on Nuclear and Hazardous Waste Management*, Amer. Nuclear Soc., Chattanooga, TN, Sept., 2000.
- Walker, D. and R. Senger, 2000. **Yucca Mountain Repository Performance: Assessment of DOE Spent Fuel Effects**, *in Proc. of Spectrum 2000 International Conf. on Nuclear and Hazardous Waste Management*, American Nuclear Society, Chattanooga, TN, September, 2000.
- Freeze, G. A., D. D. Walker, and M. S. Beljin, 2000. **Solute Transport Modeling**, *in Standard Handbook of Env. Science, Health & Technology*, J. Lehr, (ed.), McGraw-Hill, New York.
- Walker, D. D., 2000. **Geostatistics**, *in Standard Handbook of Environmental Science, Health and Technology*, J. Lehr, (ed.), McGraw-Hill, New York.
- Walker, D., L. Eriksson, L. Lovius, and A. Ström, 1999. **Flow model uncertainty reduction via inverse modelling of multiscale hydraulic test data**: *in Proc. Third GEOTRAP Workshop*, NEA/OECD, Barcelona, Spain.
- Walker, D., L. Eriksson, L. Lovius, and A. Ström, 1997. **Three-dimensional inverse modelling of multiscale hydraulic test data**, presented at Amer. Geophys. Union Fall Meeting, San Francisco, CA. Also *in Proc. Field Testing and Associated Modeling Workshop*, Lawrence Berkeley Laboratory, 1997, Berkeley, CA.
- Walker, D. D., H. Zhang, D. M. Peterson, R.G. Knowlton, 1996. **A probabilistic model of volatile contaminant transport in the saturated and unsaturated zones**: *in Proc. ModelCARE '96*, Int. Assoc. Of Hydrology, Boulder, Colorado.
- Knowlton, R. G., D. M. Peterson, D. Metzler, D. D. Walker, B. Rutherford, J. White, J. Massman, D. McCorquodale, K. Belcourt, and E. Klavetter, 1995. **Monitor well network design with a decision analysis tool**: *in Proc. ER '95*, Office of Environmental Restoration, U.S. Dept. of Energy, Denver, Colorado.
- Warner, J. W., and D. D. Walker, 1992. **An efficient, user-friendly finite element groundwater modeling package**: *in Proc. 1992 Solving Ground Water Problems with Models Conference*, National Water Well Assoc.

TECHNICAL REPORTS

- Andrews, C., K. Czerwinski, J. Rumbaugh, D. Walker, C. Zheng, and M.L. Zoback, 2010. **External Peer Review Team Report Underground Testing Subproject for Frenchman Flat**, Navarro Nevada Env. Services / Dept. of Energy.
- Meyer, S.C., Y.-F. Lin, G.S. Roadcap, and D.D. Walker. 2009. **Kane County Water Resources Investigations: Simulation of Groundwater Flow in Kane County and Northeastern Illinois**. Illinois State Water Survey Contract Report 2009-7.
- Walker, D. D., P. A. Cello, A. J. Valocchi, and B. Loftis, 2006. **High-Throughput Computing for the Analysis of Tracer Tests in Fractured Aquifers**, Illinois State Water Survey Contract Report 2006-4, Champaign, IL.
- McKenna, S., and D. Walker, 1999. **Modeling Sub Gridblock Scale Dispersion in Three-Dimensional Heterogeneous Fractured Media**, Civilian Radioactive Waste Management System M&O Analysis and Modeling Rep. AMR ANL-NBS-HS-000022 Rev 00.
- Duguid, J., G. Saulnier, R. Senger, and D. Walker, 1999. **Performance Assessment Sensitivity Analyses of Selected U.S. Department of Energy Spent Fuels**, Dept. of Energy Analysis Report ANL-WIS-MD-000001 REV 00A.

Gylling, B., M. Lindgren, N. Marsic, S. Södergren, H. Widén, and D. Walker, 1999. **Säkerhet och Vetenskap: Site-scale stochastic continuum modelling of Aberg, Results [sic] and illustrations**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Working Rep. TS-99-05, Stockholm, Sweden.

Gylling, B., M. Lindgren, N. Marsic, S. Södergren, H. Widén, and D. Walker, 1999. **Säkerhet och Vetenskap: Site-scale stochastic continuum modelling of Ceberg, Results [sic] and illustrations**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Working Rep. TS-99-07, Stockholm, Sweden.

Walker, D., and B. Bergman, 1999. **Verification of HYDRASTAR 1.7: Transient simulation and pilot point calibration**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Working Rep. TS 99-16, Stockholm, Sweden.

Gylling, B., D. Walker, and L. Hartley, 1999. **Site-scale groundwater flow modelling of Beberg**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Technical Rep. TR 99-18, Stockholm, Sweden.

Walker, D., and B. Gylling, 1999. **Site-scale groundwater flow modelling of Ceberg**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Technical Rep. TR 99-13, Stockholm, Sweden.

Widén, H., and D. Walker, 1999. **SR 97 Alternative models project: Stochastic continuum modelling of Aberg**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Technical Rep. TR 99-42, Stockholm, Sweden.

Walker, D., and B. Gylling, 1998. **Site-scale groundwater flow modelling of Aberg**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Technical Rep. TR 98-23, Stockholm, Sweden.

Bergman, B., and D. Walker, 1998. **The relationship between stochastic anisotropy and hydraulic anisotropy: Numerical experiments using HYDRASTAR 1.7.2**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Progress Rep. PR U-98-12, Stockholm, Sweden.

Walker, D., I. Rhén, and I. Gurban, 1997. **Compilation of hydrogeologic data for Aberg, Beberg and Ceberg**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Technical Rep. TR 97-23, Stockholm, Sweden.

Walker, D., L. Lovius, and L. Eriksson, 1997. **Verification of HYDRASTAR 1.7: Nugget effect in geostatistical simulations**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Progress Rep. PR U-97-22, Stockholm, Sweden.

Walker, D., L. Eriksson, and L. Lovius, 1996. **Analysis of the Äspö LPT2 pumping test via simulation and inverse modelling with HYDRASTAR**, Swedish Nuclear Fuel and Waste Management Co. (SKB) Technical Rep. TR 96-23, Stockholm, Sweden.

Walker, D. D., D. M. Peterson, R. G. Knowlton, H. Zhang, B. Rutherford, J. E. White, J. Massmann, and B.E. Bullard, 1995. **Borehole optimization support systems (BOSS): Theory**, Sandia National Laboratories, Albuquerque, New Mexico.

Walker, D. D., D. M. Peterson, R. G. Knowlton, H. Zhang, B. Rutherford, J. E. White, and J. Massmann, 1995. **Borehole optimization support systems (BOSS): Regulatory framework and merit**, Sandia National Laboratories, Albuquerque, New Mexico.

Walker, D. D., 1994. **Nonparametric estimation for spatial data by weighted LAD regression**, Colorado State University Ph.D. dissertation.

Walker, D. D., 1986. **Operational management model of the Rocky Mountain Arsenal's Northwest Boundary Barrier System**, Colorado State University M.S. thesis.

Warner, J. W., D. D. Walker, and G. J. Ward, 1986. **Digital operational management model of the northwest boundary barrier system at the Rocky Mountain Arsenal near Denver, CO**, Tech. Report. #11, Colorado State University Groundwater Program.