THOMAS MURRAY HANNA

Education

Master of Science in Geology, 1983
Western Michigan University, Kalamazoo, Michigan

Bachelor of Science in Geology, 1979
Michigan State University, East Lansing, Michigan

Registrations

Registered Professional Geologist in Wyoming, Kentucky, and Arizona

Professional Experience

Johnson Screens, Durango, Colorado. District Manager/Hydrogeologist. 1999 to Present

Currently providing technical support with the design of wells and use of well products for water supply, ground-water contamination and well rehabilitation. Expertise includes design of wells for maximizing production in large-diameter, deep well installations. Involved with teaching classes for efficient well design, well development and well rehabilitation.

Hydrologic Consultants, Inc., Lakewood, Colorado. Associate Hydrogeologist and Technical Manager. 1989 to 1999

Responsible for design and implementation of hydrogeologic investigations related to mine dewatering, water supply, and ground-water contamination. Expertise includes developing conceptual hydrogeologic models and incorporating them into numerical models to estimate mine inflow and design dewatering systems. Considerable experience in providing technical support for EISs and permitting of water disposal and water rights. Has been qualified as expert witness in hydrogeology. Other specific experience has included design of artificial recharge system in shallow alluvial aquifer, design and analysis of pumping tests, design of large capacity water supply and dewatering wells, evaluation of borehole geophysical logs, and water resource evaluations.

S.S. Papadopulos & Associates, Inc., Lakewood, Colorado. Staff Hydrogeologist. 1988 to 1989

Hydrogeologic investigations related to mine dewatering and ground-water supply. Specific responsibilities included developing conceptual hydrogeologic models; design, implementation, and analysis of aquifer tests; preparation of detailed specifications for large wells and pumping systems; training mining personnel in hydrogeologic data acquisition; analysis and design of mine dewatering systems; water resource analysis; and water rights investigations.

Golder Associates, Inc., Denver, Colorado. Hydrogeologist. 1988.

Responsible for planning, supervising, and conducting hydrogeologic investigations for mine dewatering, ground-water contamination and water supply. Projects involved aquifer test design and interpretation, well design, supervision of well construction, estimating inflow to mines, design of dewatering systems, and design of ground-water monitoring systems.

Bishop, Brogden & Associates, Denver, Colorado. Ground-Water Geologist. 1985 to 1988.

Involved in wide range of water-resource studies related to ground-water exploration, development, and contamination. Experience included design, construction, and testing of large capacity water-supply wells and investigations of water rights.

Duval Corporation, Tucson, Arizona. Exploration Geologist. 1982 to 1985.

Exploration for precious metals in extensional tectonic and caldron environments of southwestern U.S. and Alaska. Responsibilities included detailed mapping, sampling, and evaluation of properties.

Utah International, Reno, Nevada. Exploration Geologist. 1979 to 1982.

Reconnaissance exploration and follow-up evaluations for precious and base metals in central Oregon. Experience included reconnaissance and detailed mapping, sampling, and supervision of drilling crews.

Professional Societies

Association of Ground-Water Scientists & Engineers

List of Publications

Hanna, T.M., 2022 – Present. Ground Water and Wells, Bi-monthly column: Water Well Journal,

Hanna, T.M., Schnieders, M.J. and Schnieders, J.H., 2016, Operational Stage of the Well, National Ground Water Association Press, Westerville, OH. 144 p.

Hanna, T.M., Sunberg, E. and Hayden, G., 2013, Installation of Infiltration Gallery at Greens Creek Mine - Juneau, Alaska: Proceedings of Mine Water Solutions – Extreme Environments, Lima Peru. 9 p.

Hanna, T.M., 2012, Design and completion of mine water wells and the applications of wire-wrap pre-pack screens: Proceedings of the 3rd International congress on Water Management in the Mining Industry, Santiago, Chile, 8 p.

Hanna, T.M., 2009, Well design revisited: Water Well Journal Vol. 63, No. 7, p. 41-45.

Hanna, T.M. and Sterrett, R.J., 2007, Chapter 2 - Occurrence of Groundwater and Aquifer Types: in Groundwater and Wells 3rd Edition, Edited by R.J. Sterrett, Johnson Screens, New Brighton, MN.

Hanna, T.M., 2007, Chapter 3 – Surface Exploration and Hydrogeologic Logging: in Groundwater and Wells 3rd Edition, Edited by R.J. Sterrett, Johnson Screens, New Brighton, MN.

Hanna, T.M., 2007, Chapter 11 – Development of Water Wells: in Groundwater and Wells 3rd Edition, Edited by R.J. Sterrett, Johnson Screens, New Brighton, MN.

Hanna, T.M., 2007, Consistent Data: Ground Water Canada Vol. 33, No. 2, p. 26-27.

Hanna, T.M., 2006, Guide for Using the Hydrogeologic Classification System for Logging Water Well Boreholes: Westerville, OH, NGWA Press, 18 p.

Gleeson, T., Hanna, T.M., and Wendling, G., 2005, Squeezing a few more drops from bedrock: Water Well Journal Vol. 59, No. 8, p. 16-17.

Hanna, T.M., 2004, Field guide for logging water-well boreholes: Johnson Screens.

Hanna, T.M., Ivanci, P.G. and Creswell, W.A., 2004, Aquifer analysis and proper well development to maximize pumping capacity in alluvial wells for Confluence Lake, Delta, Colorado: CanWell 2004, Program with papers, 11 p.

Hanna, T.M., Ivanci, P.G. and Creswell, W.A., 2003, Aquifer analysis and proper well development to maximize pumping capacity in alluvial wells: Water Well Journal Vol. 57, No. 12 p. 34 – 37.

Hanna, T.M. and Gandera, W., 2000, Chapter 15 Paradox Basin: Colorado Ground-Water Atlas 1999: Colorado-Ground-Water Association, p. 75-79.

Hanna, T.M. and Gandera, W., 2000, Chapter 16 San Juan Basin: Colorado Ground-Water Atlas 1999: Colorado-Ground-Water Association, p. 81-84.

Hanna, T.M., Howell, R.L., Ugorets, V., Ternes, T. and McCarter, J. 1999, Use of a frozen-earth wall to reduce effects of dewatering on alluvial aquifer in the vicinity of the proposed Aquarius open pit mine:

Proceedings Mining and Environment II, Sudbury, Ontario, Canada, p. 1082-1092.

Hanna, T.M., Stone, W.J., Tagawa, L., and Burton, S., 1997, Investigation of ground-water recharge using the chloride-ion method at Lowry Landfill, Denver, Colorado: AIH - Advances in Ground-Water Hydrology, p. 253-258.

Hanna, T.M., Azrag, E.A. and Atkinson, L.C., 1994, Use of an analytical solution for preliminary estimates of ground-water inflow to a pit: Mining Engineering, Vol. 46, No 2, p. 149 – 152.

Hanna, T.M. and Streiff, R.E., 1994, Dewatering at the Cove Mine, Nevada, USA: 5th International Mine Water Congress, Nottingham, U.K., p. 197 – 205.

Hanna, T.M., 1990, Acquisition of hydrologic data from exploration and production drilling: Great Basin Symposium Reno/Sparks, Nevada, Program with Abstracts, p. 109.

Hanna, T.M. and Harmon, E.J., 1989, An overview of the historical, stratigraphic and structural setting of the aquifer setting of the San Luis Valley: Colorado Ground-Water Association - Water in the Valley, p. 1 – 32.

Hanna, T.M. and Rothauge, F., 1989, Well development with acid wool: Water Well Journal, Vol. 43, No. 10, 54 – 55.

Atkinson, L.C., Hanna, T.M., and Anthony, J.W., 1989, Investigation and implementation of mine dewatering systems: Reprint from Proceedings of the First Joint Meeting between SME and AIMM, Reno Nevada, 10 p.

Hanna, T.M., 1983, The geology and geochemistry of the Summit Creek molybdenum prospect, Custer County, Idaho: Masters thesis, Western Michigan University, 71 p.