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TERRY KATZER, *HYDROGEOLOGIST*

2-11-2018

EDUCATION

B.S. in Geology - Mackay School of Mines - University of Nevada, Reno, 1953-1958
Twelve units of graduate hydrogeology - University of Nevada, Reno, 1964-1966
Many technical and administrative short courses

Professional Affiliations

Geological Society of America (*Hydrology Division, Program Manager, 1984*), Inactive
Colorado River Water Users Association, Inactive
National Water Well Association, Inactive
American Water Works Association (*Water Management Committee member, 1987-90, Co-chair 1989-1990*), Inactive
American Water Resources Association, Inactive
Nevada Water Resources Association, Active
Sewage and Waste Water Committee, Advisory to the Board of Commissioners, Clark County, Nevada (*member 1986-1990, Chairman 1988*).

EXPERIENCE BY DATE

I became familiar with drilling and collecting core samples in 1960 while working for a mineral exploration company in Nevada. The company had interests in not only Nevada, but also Canada and Southeast Alaska. I sited holes, logged and split core from many holes in those areas. When I went to work for the U.S. Geological Survey I found myself back in Alaska on a drill rig in the Aleutian Islands. In addition to other duties I spent a great deal of time on one hole in Amchitka; it was for the second of three nuclear shots.

Returning to Nevada for the USGS I sited and sampled water wells for the Native Americans near McDermitt. It was the first time I worked with a Cable Tool Rig and a Mud Rotary Rig. I was a project member on the USGS Geothermal Investigations in the Fallon area that were drilled with a Mud Rotary Rig. I sited and sample numerous water monitoring wells in the Las Vegas Valley that were drilled with an Auger Rig.

During my time as Director of Research with the Las Vegas Valley Water District I oversaw numerous wells drilled for monitoring, artificial recharge, and water supply wells. Virtually all were drilled by the reverse rotary method.

Independent Consulting Hydrogeologist (Semi-retired)
2013 – 2018; Cordilleran Hydrology, Inc. 1995-2013

SUMMARY

Consulting Hydrogeologist in the western states with emphasis in Nevada.

Founder and principal-in-charge of Cordilleran Hydrology, Inc. As a consulting hydrogeologist, I work throughout the western United States, with an emphasis in Nevada and specialize in hydrogeologic evaluations, problem definition, project oversight, quality assurance, and all phases of report preparation. Major effort has been directed to the hydrogeology of numerous ground- and surface-water systems. I have been qualified as an Expert Witness in water-right hearings about 20-25 times before the Nevada State Engineer; the majority of times testifying on behalf of the State. Completed projects are listed by publication in the bibliography section. Prior to forming my own company I was with the Las Vegas Valley Water District where I oversaw a major hydrologic investigation of ground-water basins in eastern and southern Nevada. Between 1966 and 1985 I was with the U. S. Geological Survey.

In 2006 I finished two major projects; one as an advisor to the University of Adelaide in Australia evaluating the potential for artificial recharge and two, a major water-resource study in a large basin in northern Nevada and eastern California. In 2013, I complete six years working on a surface-water network for a mining company in north-central Nevada. During that time I was involved in two water-rights hearings before the State Engineer, which resulted in favorable decisions for the mining company.

Las Vegas Valley
Water District
1985-1995

Director of Research for the Las Vegas Valley Water District in Las Vegas, Nevada. Evaluated artificial recharge through deep well injection as a means of reducing subsidence and providing a measure of drought and peak demand storage. The project has proven quite successful and the District now has the largest recharge project of this type in the world.

Launched a major hydrologic investigation of ground-water basins in eastern and southern Nevada including the lower Virgin River Basin. The purpose of this multi-discipline investigation is to explore the potential for a water resource development project as a source option for southern Nevada. As a follow-up to the Virgin River project I served for the Southern Nevada Water Authority on a technical committee with the Arizona and Utah Departments of Water Resources.

Directed a large well drilling program in Las Vegas Valley and other nearby valleys where the District operates rural water systems. This involved the drilling of approximately 20 monitoring wells, plus another 20+ replacement wells, new wells and artificial recharge wells. This process established a ground-water quality monitoring network in Las Vegas Valley designed to provide an early warning for the principal public supply aquifer

U.S. Geological Survey
1966-1985

Project member/leader in all disciplines. The work included streamgaging throughout Alaska and Nevada, ground-water hydraulics on Amchika Island in the Bearing Sea, and water-resource evaluations of select valleys in Nevada. In 1979, I became the Assistant District Chief of the Nevada District and Acting District Chief followed by State Office Chief in 1981. Duties included direct responsibility for program development and planning, budgeting, administration, and technical assurance of ongoing programs.

Federal Watermaster
1964-1966

Assistant Federal Watermaster: Responsible for determining and adjusting surface-water diversions of the Truckee-Carson River System, western Nevada.

Carson Water Sub-
Conservancy District
1962-1964

Secretary-Manager: Responsible for liaison between U. S. Bureau of Reclamation and the agricultural community for a potential reclamation project (*Watasheamu Division of the Washoe Project*), western Nevada.

Standard Slag Co.
1960-1962

Exploration Geologist: Mineral exploration in Western U. S., Canada, and Alaska.

U. S. Army
1958-1960

Signal Corps Officer: Executive Officer and Company Commander of Signal Corps School Companies.

The technical aspects of my career in hydrogeology are fairly well represented in the following bibliography that is divided into four categories, ground water, surface water, ground and surface water, and other technical and administrative publications.

GROUND WATER

- Katzer, T. L., 1977, **Water-level changes associated with ground-water development in Las Vegas Valley, Nevada, March 1976 to March 1977**: Nevada Division of Water Resources Information Report 27, 35 p.
- Katzer, T. L., 1980, **General ground-water map of the Carson City Quadrangle, Nevada**: Nevada Bureau of Mines and Geology, Environmental Series 7 1/2° Quadrangle Map 1AF.
- Harrill, J. R., and Katzer, T. L., 1980, **General ground-water map of the Las Vegas SE Quadrangle, Nevada**: Nevada Bureau of Mines and Geology, Environmental Series, 7 1/2° Quadrangle Map No. 3AF.
- Katzer, T. L., Harrill, J. R., Berggren, G. E., and Plume, R. W., 1985, **General ground-water map of the Las Vegas SW Quadrangle, Nevada**: Nevada Bureau of Mines and Geology, Environmental Series, 7 1/2° Quadrangle Map.
- Katzer, Terry, 1986, **A proposal for a High Plains States ground-water demonstration program**: Las Vegas Valley Water District, Las Vegas, Nevada, 40 p.
- Katzer, Terry, 1986, **Ground-water hydrology, Carson City Quadrangle, Nevada**: Nevada Bureau of Mines and Geology Open-File Report 86-7 (supplements NBMG map 1AF), 7 p.
- Brothers, Kay, and Katzer, Terry, 1987, **Artificial recharge to the Las Vegas Valley ground-water system - A demonstration project - Clark County, Nevada**: Geological Society of America, Abstracts with program, V. 19, No. 7, p. 602.
- Katzer, Terry, Brothers, Kay, and Dixon, Gary, 1987, **The quest for ground water in an arid environment**: Geological Society of America, Cordilleran Section, Abstracts with program, V. 20, No. 3, p. 172.
- Brothers, Kay, and Katzer, Terry, 1988, **Ground-water chemistry changes resulting from stressed aquifer systems in the Las Vegas Valley, Clark County, Nevada**: Nevada Department of Conservation and Natural Resources, Division of Environmental Protection, 66 p.
- Brothers, Kay, and Katzer, Terry, 1988, **Artificial recharge through public supply wells, Las Vegas Valley, Clark County, Nevada**: Underground Injection Practices Council Research Foundation, Proceedings of Symposium; Injection Well Technology, Las Vegas, Nevada, p. 283-301.
- Katzer, Terry, and Brothers, Kay, 1989, **Artificial recharge in Las Vegas Valley, Clark County, Nevada**: Journal of Ground Water, January-February, 1989, p. 51-56.

- Brothers, Kay, and Katzer, Terry, 1989, **Artificial recharge for peak water demands in Las Vegas Valley, Clark County, Nevada**: Arizona Hydrological Society, Phoenix, Arizona, Proceedings of Symposium; Artificial Recharge, p. 64-74.
- Katzer, Terry, Morros, Peter G., and Quinn, William G., 1989, **Artificial recharge in Nevada: An institutional and legal perspective with emphasis on the Las Vegas Valley**: Nevada Water Resources Association, Annual Conference Program with abstracts, March 1989, Carson City, Nevada.
- Brothers, Kay, and Katzer, Terry, 1990, **Water banking through artificial recharge, Las Vegas Valley, Clark County, Nevada**: Journal of Hydrology, 115, p. 77-103.
- Katzer, Terry, and Brothers, Kay, 1990, **Moving toward the millennium**: American Society of Civil Engineers, International Symposium; Hydraulics/Hydrology of Arid Lands, p. 124-130.
- Morros, Peter G., and Katzer, Terry, 1990, **Over drafting ground-water basins -- mining or managing?**: American Institute of Hydrology, Proceedings of Symposium; Minimizing the Risk to the Environment, Alexander Zaporozce, Editor, Kendall/Hunt Publishing Company, Dubuque, Iowa, p. 161-168
- Katzer, T., Brothers, K., Johnson, M., Morris, T., and Bernholtz, A., 1991, **Design and Evaluation of joint-use wells for water supply and artificial recharge in Las Vegas Valley, Clark County, Nevada**: American Water Works Association, Proceedings of Annual Conference, p. 527-540.
- Bernholtz, A. Brothers, K., and Katzer, T., 1991, **Analyses of aquifer responses due to continued artificial recharge of treated Colorado River water, Las Vegas Valley, Clark County, Nevada**: Arizona Hydrological Society, Proceedings of Fourth Annual Meeting, p. 110-118.
- Katzer, Terry, and Brothers, Kay, 1992, **Meeting the urban water demands in Nevada, the Las Vegas proposal**: Rocky Mountain Ground-Water Conference, Symposium Proceedings, Boulder, Colorado.
- Brothers, Kay, Bernholtz, Alan, and Katzer, Terry, 1994, **Artificial ground-water recharge in Las Vegas Valley, Clark County, Nevada, model prediction - "no cone of depression here"**: American Society of Civil Engineers, Proceedings of Second International Symposium; Artificial Recharge of Ground Water, Orlando, Florida.
- Bernholtz, Alan, Brothers, Kay, and Katzer, Terry, 1994, **Artificial recharge in Las Vegas Valley, Clark County, Nevada -- storing today, treating tomorrow?**:

American Society of Civil Engineers, Proceedings of Second International Symposium; Artificial Recharge of Ground Water, Orlando, Florida.

Brothers, Kay, Katzer, Terry, and Johnson, Michael, 1996, **Hydrology and steady state ground-water model of Dry Lake and Delamar Valleys, Lincoln County, Nevada**: Las Vegas Valley Water District, Cooperative Water Project, Series Report No. 16, 48 p.

Katzer, Terry, 1996, **Conceptual model of the hydrogeology of Coyote Spring Valley, Clark and Lincoln Counties, Nevada and the feasibility of developing ground-water resources**: Cordilleran Hydrology, Inc., consultants report, 16 p.

Katzer, Terry, 1997, **Hydrogeology of Warm Springs Valley and feasibility of aquifer recharge, storage, and recovery with emphases on the Marshall and Winnemucca Ranch areas, Washoe County, Nevada**: Cordilleran Hydrology, Inc., consultant's report, 29 p.

Thompson, Robert, N., and Katzer, Terry, 1997, **Evaluation of potential water development from the shallow ground-water aquifer in the Las Vegas Valley artesian basin, Las Vegas, Nevada**: Harding Lawson Associates consulting report, 11 p.

Bookman-Edmonston Engineering, Inc., J-U-B Engineers, Inc., and Katzer, Terry, 1998, **The Eastern Snake Plain aquifer managed recharge project, draft interim report**: Consultants report prepared for the Idaho Department of Water Resources.

Resource Concepts Inc., Katzer, Terry, and Squires, Robert, 2000, **A report of findings: Actions that may increase flows into Walker Lake**: Resource Concepts, Inc., consultants report prepared for the Walker River Basin Advisory Committee.

Donovan, David, Katzer, Terry, 2000, **Hydrologic implications of greater ground-water recharge to Las Vegas Valley, Nevada**: American Water Resources Association, Vol. 36, No 5. P. 1133-1148.

Donovan, David, and Katzer, Terry, 2002, **Recharge and discharge in the White River and Meadow Valley Flow Systems**: Nevada Water Resources Association Annual Conference, Abstracts of Technical Presentations, p. 16.

Langenheim, V. E., Glen, J. M., Jachens, R. C., Dixon, G. L., Katzer, T. L., and Morin, R. L., 2000, **Geophysical constraints on the Virgin River Depression. Nevada, Utah, and Arizona**: U. S. Geological Survey, Geologic Division, Open-File Report 00-407, 26 p.

Langenheim, V. E., Glen, J. M., Jachens, R. C., Dixon, G. L., Katzer, T. L., and Morin, R. L., 2000, **Geologic and geophysical constraints on the hydrology of the lower Virgin River Valley, Nevada-Arizona-Utah**: Geological Society of America, Abstracts with Program.

Johnson, Michael E., Dixon, Gary, and Katzer, Terry, 2000, **Hydrogeology and ground-water conditions of the Tertiary Muddy Creek Formation in the lower Virgin River Basin of southeastern Nevada, Arizona, and Utah**: Geological Society of America, Abstracts with Program.

Langenheim, V. E., Bohannon, R. G., Glen, J. M., Jachens, J. A., Grow, J. A., Miller, J. J., Dixon, G. L., and Katzer, T. L., 2001, **Basin configuration of the Virgin River depression, Nevada, Utah, and Arizona: A geophysical view of deformation along the Colorado Plateau-Basin and Range transition**: Utah Geological Association Publication 30 – Pacific Section American Association of Petroleum Geologist Publication GB78, p 205-225.

Johnson, Jeff, Smith, Dwight, and Katzer, Terry, 2002, **Regional carbonate aquifer flow – Where is the water going?:** Nevada Water Resources Association Annual Conference, Abstracts of Technical Presentations, p. 17.

Devitt, D. A., Donovan, D. J., Katzer, T., and Johnson, M., 2002, **A reevaluation of ground-water discharge for the Las Vegas Valley, Nevada**: American Water Resources Association. Vol. 38, No. 6, p.1735-1751.

Katzer, T. L. in Southern Nevada Water Authority, 2003, **Hydrogeology of Tikaboo Valley and Three Lakes Valleys, Clark and Lincoln Counties, Nevada**: Southern Nevada Water Authority, Las Vegas, Nevada, 70 p..

Shanahan, Rebecca D., Wallen, Michael, and Katzer, Terry, 2005, **Estimating evapotranspiration using remote sensing and spectral indices in eastern and southern Nevada**: Annual Nevada Water Resources Association, Abstract and Poster Session in Conference Proceedings.

Teubner, M. D., Katzer, T., and Lee, J. W., 2006, **Toowoomba Ground-water modeling report**: University of Adelaide, Australia, 27 p.

Donovan, D. J., Katzer, T., and Brothers, K., 2008 (Draft), **Development of ground-water recharge estimates in Nevada with emphasis on using long-term precipitation data**: Nevada Bureau of Mines and Geology, Reno, Nevada.

Donovan, D. J., Katzer, T., and Brothers, K., 2008, **Review of ground-water recharge methodologies in Nevada with an analysis of geologic controls on the recharge process**: Southern Nevada Water Authority, Las Vegas, Nevada, 67 p.

SURFACE WATER

Katzer, T. L., **Surface water** in Harrill, J. R., 1971, **Water-resources appraisal of the Granite Springs Valley area, Pershing, Churchill, and Lyon Counties, Nevada**:

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Reconnaissance Series, Report 55, 36 p.

Katzer, T. L., and Harmsen, Lynn, 1974, **Surface water**, in Van Denburgh, A. S. and Rush, F. E., **Water resources appraisal of Railroad and Penoyer Valleys, east-central Nevada**: Nevada Department of Conservation and Natural Resources Reconnaissance Series, Report 60, p. 12-18.

Glancy, P. A., and Katzer, T. L., 1975, **Probable effects of the Leviathan Creek Basin landslide, Alpine County, California**: U.S. Geological Survey Open-File Report 75-75, 3 p.

Glancy, P. A., and Katzer, T. L., 1975, **Fluvial sediment transport and its relation to urbanization at Incline Village, Lake Tahoe, Nevada**: Association of Engineering Geologist, 18th Annual Meeting, Program with Abstracts, 23 p.

Katzer, T. L., Glancy, P. A., and Harmsen, Lynn, 1976, **A brief hydrologic appraisal of the July 3-4, 1975 flash flood in Las Vegas Valley, Nevada**: U. S. Geological Survey Open-File Report 76-100, 40 p.

Glancy, P. A., and Katzer, T. L., 1977, **Flood and related debris hazards map, Washoe City folio, Nevada**: Nevada Bureau of Mines and Geology, Environmental Series, Washoe Lake Area, 7 1/2° Quadrangle Map with text.

Katzer, T. L., and Glancy, P. A., 1978, **Flood and debris hazards along principal streams, South Lake Tahoe quadrangle, California-Nevada**: Nevada Bureau of Mines and Geology Environmental Series, 7 1/2° Quadrangle Map 2A1.

Katzer, T. L., 1979, **Flood and debris hazards in the Las Vegas SE quadrangle area, Las Vegas, Nevada**: Nevada Bureau of Mines and Geology Environmental Series, 7 1/2° Quadrangle Map 3A1.

Katzer, Terry, and Schroer, C. V., 1981, **Flood and debris hazards along principal streams, Carson City, Nevada, quadrangle**: Nevada Bureau of Mines and Geology Environmental Series, 7 1/2° Quadrangle Map 1A1.

Katzer, Terry, and Bennett, J. P., 1983, **Sediment transport model for the East Fork of the Carson River, Carson Valley, Nevada**: University of Kentucky, Lexington, Kentucky, International Symposium; Urban Hydrology, Hydraulics and Sediment Control, Proceedings of Symposium, p. 421.

Katzer, Terry, and Squires, Robert, R., 1984, **Flood and related flow hazards in the Las Vegas SW quadrangle area, Nevada**: Nevada Bureau of Mines and Geology Environmental Series, 7 1/2° Quadrangle Map.

- Katzer, Terry, 1986, **Flood and related debris flow hazards, Las Vegas SE quadrangle, Nevada:** Nevada Bureau of Mines and Geology Open-File Report 86-5, 4 p. (Supplements NBMG Map 3A1)
- Katzer, Terry, and Glancy, Patrick A., 1986, **Flood and related debris flow hazards along principal streams, South Lake Tahoe quadrangle, Nevada and California:** Nevada Bureau of Mines and Geology Open-File Report 86-6, 11 p. (Supplements NBMG Map 2A1)
- Katzer, Terry, and Schroer, C. V., 1986, **Flood and related debris flow hazards along principal drainages, Carson City Quadrangle, Nevada:** Nevada Bureau of Mines and Geology Open File Report 86-8, 13 p. (Supplements NBMG Map 1A1)
- Mojib, Reza, Grinnell, Gary, and Katzer, Terry, 1995, **Comparison of two methods to compute sediment yield in the lower Virgin River at Littlefield, Arizona:** United States Committee on Large Dams, Annual Meeting and Lecture Proceedings, San Francisco, California, p. 369-379.
- Mojib, Reza, and Katzer, Terry, 1996, **The determination of sediment loads in the lower Virgin River, Clark County, Nevada:** Sixth Federal Interagency Sedimentation Conference Proceedings, March. 1996, Las Vegas, Nevada.
- Katzer, Terry, Squires, Robert, and Zeier, Charles, Inc., 1999, **A hydrologic evaluation of the flow of the Walker River between Wabuska and Weber Reservoir, Lyon County, Nevada:** Resource Concepts Inc., consultants report, 18 p.
- Cole, Erin and Katzer, Terry, 2000, **Analysis of gains and losses in Virgin River flow between Bloomington, Utah and Littlefield, Arizona:** Southern Nevada Water Authority, Las Vegas, Nevada, 57 p.
- Cole, Erin, and Katzer, Terry, 2000, **Gains and losses in the lower Virgin River, Utah and Arizona:** Southern Nevada Water Authority, Las Vegas Nevada, 9 p.
- Katzer, Terry, Cole, Erin, and Dixon, Gary, 2000, **Geologic control solves hydrologic questions of gains and losses in the Virgin River in southwestern Utah:** Geological Society of America, Abstracts with program.
- Johnson, J., Smith, D.L., and Katzer T., 2002, **Regional Carbonate Aquifer - A hypothesis of terminal ground-water outflow to the Colorado River:** Abstract and presentation made at the *2002 NWRA Annual Nevada Water Conference*.
- Squires, Robert, and Katzer, Terry, 2010, **Surface-water resource report – 2009, Roberts Mountains, Eureka, County, Nevada:** Consultants Report prepared for Eureka Moly, LLC., Eureka, Nevada, 30 p.

Squires, Robert, and Katzer, Terry, 2011, **Surface-water resource report – 2010, Roberts Mountain, Eureka, County, Nevada**: Consultants Report prepared for Eureka Moly, LLC., Eureka, Nevada, 75 p.

Squires, Robert, and Katzer, Terry, 2012, **Surface-water resource report – 2011, Roberts Mountain, Eureka, County, Nevada**: Consultants Report prepared for Eureka Moly, LLC., Eureka, Nevada, 75 p.

GROUND AND SURFACE WATER

Rush, F. E., and Katzer, T. L., 1973, **Water-resources appraisal of Fish lake Valley, Nevada and California**: Nevada Division of Water Resources Reconnaissance Report 58, 61 p.

Glancy, P. A., and Katzer, T. L., 1975, **Water-resources appraisal of the Carson River Basin, western Nevada**: Nevada Division of Water Resources Reconnaissance Report 59, 126 p.

Katzer, Terry, Durbin, T. J., and Maurer, D. C., 1984, **Water-resources appraisal of the Galena Creek Basin, Washoe County, Nevada**: U.S. Geological Survey Open- File Report 84-433, 59 p.

Bell, John W., and Katzer, Terry, 1984, **Quaternary tectonic history of the IXL Canyon Quadrangle, Dixie Valley, Nevada**: Geological Society of America, Abstracts with program, V. 16, No. 6., p. 442.

Bell, John W., and Katzer, Terry, 1987, **Surficial geology, hydrology, and Quaternary tectonic history of the IXL Canyon area, Nevada**: Nevada Bureau of Mines and Geology, Bulletin 102, 52 p.

Katzer, Terry, and Bell, J. W., 1987, **Hydrologic responses in the Dixie Valley area, Churchill County, Nevada, from the 1954 Dixie Valley earthquake**: Geological Society of America, Abstracts with program, V. 19, No. 7, p. 722.

Katzer, Terry, and Brothers, Kay, 1989, **Perils of progress -- hydrogeological hazards in Las Vegas Valley, Clark County, Nevada**: Meetings of the Arizona Section, American Water Resources Association and the Hydrology Section, Arizona Nevada Academy of Science, Proceedings of Symposium; Hydrology and water resources in Arizona and the Southwest, V. 19, p. 7-18.

Brothers, K., Tracy, J., Katzer, T., Stock, M., Bentley, C., Zdon, A., and Kepper, J., 1992, **Hydrology and interactive computer modeling of ground and surface water in the lower Virgin River Valley, primarily in Clark County, Nevada**: Las Vegas Valley Water District, Cooperative Water Project, Series Report No. 1, 90 p.

- Brothers, K., Katzer, T., Mojib, R. M., Grinnell, G., Bernholtz, A., and Johnson, M., 1993, **Addendum to hydrology and interactive computer modeling of ground and surface water in the lower Virgin River Valley, primarily in Clark County, Nevada**: Las Vegas Valley Water District, Cooperative Water Project, Series Report No. 1-A, 35 p.
- Katzer, Terry, and Brothers, Kay, 1995, **To capture a river - water supply development of the Virgin River, Clark County, Nevada**: American Water Resources Association, Proceedings of Symposium; Water in the 21st Century, Conservation, Demand, and Supply, Salt Lake City, Utah, p. 35 - 45.
- Smith, Dwight, and Katzer, Terry, 1998, **Proposed development of a supplemental water supply for the North Valleys Area of Reno, Nevada**: Nevada Water Resources Association Annual Meeting, Abstract.
- Katzer, T., Leising J., Brothers, K., and Ball, George, 1998, **Hydrogeological evaluation and ground-water model of the Wadsworth-Dodge Flat area, Washoe County, Nevada**: Waterresource Consulting Engineers, Inc., Report prepared for the Town of Fernley, Nevada.
- Katzer, Terry, Brothers, Kay, Cole, Erin, Donovan, David, and Johnson, Michael, 1998, **A cost-benefit analysis of artificial recharge in the Las Vegas Valley ground-water system, Clark County, Nevada**: Southern Nevada Water Authority, Las Vegas, Nevada, 39 p.
- Smith, Dwight, and Katzer, Terry, 2000, **Hydrogeology of Dry Valley, Washoe County, Nevada**: Consultants report prepared for Intermountain Pipeline, LTD., Reno, Nevada, 27 p.
- Katzer, T., in Las Vegas Valley Water District, 2001, **Water resources and ground-water modeling in the White River and Meadow Valley Flow Systems, Clark, Lincoln, Nye, and White Pine Counties, Nevada**: Las Vegas Valley Water District, Las Vegas, Nevada, 254 p.
- Dixon, Gary and Katzer, Terry, 2002, **Geology and hydrology of the lower Virgin River Valley in Nevada, Arizona, and Utah**: Virgin Valley Water District, Mesquite, Nevada, Report VVWD-01, 126 p.
- Katzer, Terry, Dixon, Gary, and Johnson Michael, 2002, **Impact analysis of water-resource development in Tule Desert, Lincoln County, Nevada on the water resources of the lower Virgin River Valley, Clark County, Nevada**: Virgin valley Water District, Report VVWD-02, 51 p.
- Johnson, Michael, Dixon, Gary L., Rowley, Peter D., Katzer, Terry, and Winters, Michael, 2002, **Hydrology and ground-water conditions of the Tertiary Muddy Creek Formation in the lower Virgin River Basin of southeastern Nevada and adjacent Arizona and**

Utah: Geological Society of America, Rocky Mountain Section, Field Guide to Geologic Excursions in Southwestern Utah and Adjacent Areas of Arizona and Nevada, May 7-9, 2002, p. 285-310.

Smith, D. L., Katzer, T., and Priestaf, I., 2002, **Independent appraisal of Martis Valley ground-water availability, Nevada and Placer Counties, California:** Kennedy/Jenks Consultants, Engineers and Scientists, Consultant's report prepared for Martis Valley Property Owners Trust, 25 p.

Smith, D. L., and Katzer, T. L., 2003, **Measurement of ground-water discharge to streams tributary to the Truckee River in Martis Valley, California:** InterFlow Hydrology, Inc., Consultant's report prepared for Martis Valley Property Owners Trust, 26 p.

Ball, G., Katzer, T. L., Smith, D. L., Dixon, G. L., 2003, **Technical Memorandum, Reconnaissance investigation for the feasibility of developing water resources in the Smoke Creek Desert Hydrographic Basin, Washoe County, Nevada and Lassen County, California:** Wateresource Consulting Engineers, Inc., Consultant's report, 35 p. Proprietary.

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OTHER TECHNICAL AND ADMINISTRATIVE REPORTS

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- Katzer, T. L., and Harmsen, Lynn, 1973a, **Bathymetric reconnaissance of Weber Reservoir, Mineral County, Nevada:** Nevada Division of Water Resources Information Report 15.
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- Katzer, Terry, Moosburner, Otto, and Nichols, William D., 1983, **Investigations and research in Nevada by the Water Resources Division, U. S. Geological Survey, 1982-83:** U. S. Geological Survey Open-File Report 83-768, 40 p.
- Tabor, R. W., Ellen, S. E., Clark, M. M., Glancy, P. A., and Katzer, T. L., 1983, **Geology, geophysics, geologic hazards, and engineering and geologic character of earth materials in the Washoe Lake area, Nevada:** Nevada Bureau of Mines and Geology Open-File Report 83-7, 87 p.
- Flagg, V. E., Moosburner, Otto, and Katzer, T. L., 1985, **Water related scientific activities of the U. S. Geological Survey in Nevada, Fiscal Years 1983-1985:** U. S. Geological Survey Report, 65 p.
- Katzer, Terry, and Brothers, Kay, 1988, **Water conservation, myth or mandate, an arid southwest perspective:** American Water Resources Association, Proceedings of Symposium; Water use Data for Water Resources Management, Tucson, Arizona, p. 273-281.
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- Bell, John W., and Katzer, Terry, 1990, **Timing of late Quaternary faulting in the 1954 Dixie Valley earthquake area, central Nevada:** Journal of Geology, V. 18, No. 7, p. 622-625.
- Katzer, Terry, Brothers, Kay, Johnson, Michael, Bernholtz, Alan, Morris, Tom, and Monaco, Janet, 1992, **Maximizing earth and computer science disciplines for development of water resources in eastern and southern Nevada:** American Institute of Hydrology, Proceedings of Symposium; Portland, Oregon.

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Shanahan, Rebecca D., Wallen, Michael, and Katzer, Terry, 2005, **Estimating evapotranspiration using remote sensing and spectral indices in eastern and southern Nevada**: Nevada Water Resources Association, Proceedings of Symposium, Growth, Water and the Quality of Life in Nevada, Reno, Nevada, Poster Session.

Terry Katzer's hourly rate = \$150/hour

Prior Expert Testimony Experience:

Mr. Katzer has testified approximately 20 – 25 times in hearings before the Nevada State Engineer. In each case, Mr. Katzer qualified as an expert in hydrogeology. In roughly one-half of those hearings Mr. Katzer was acting on behalf of the Nevada State Engineer.