

Abbreviated Vita

ROBERT L. BASKIN

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Formal Education:

2014 Ph.D. University of Utah Department of Geography, Salt Lake City, UT - Dissertation: *Occurrence and Distribution of Microbial Bioherms in Great Salt Lake, Utah*

1990 M.S. University of Utah Department of Geography, Salt Lake City, UT - Thesis: *Determination of Ground-Water Inflow Locations in Great Salt Lake, Utah using the Thermal Infrared Multispectral Scanner*

1979 B.A. Geology Thiel College, Greenville, PA

Professional Recognition, Honors, and Awards:

State of Utah Governor's Medal for Science and Technology, 2016
Friends of Great Salt Lake: Friend of the Lake (Group Award), 2016
American Association of Petroleum Geologists: A.I. Levorsen Memorial Award, 2013
USGS STAR Awards: 09/98, 12/99, 09/00, 07/04, 10/05, 10/06, 09/08, 02/15...
USGS Outstanding Performance Awards: 06/89, 06/91, 09/95... 10/09
USGS Utah Author of the Year, 1993
General Services Administration Recognition Award, 03/00
Multiple commendation letters
Invited Speaker (assorted)
Great Salt Lake Issues Forum, Salt Lake City, UT – May 2016
USGS 10th Annual Monitoring Conference, Tampa, FL – May 2016
AAPG – RMS Section, Salt Lake City, UT – Sept. 2013
Geological Society of London, London, UK – June 2013
American Fisheries Society, Page, AZ – March 2013
AAPG/SEPM Hedberg Research Conference, Houston, TX – June 2012
BG Group Student Forum – Reading, UK – October 2011

Professional Scientific Experience:

2019 – Present, Scientist Emeritus, U.S. Geological Survey, Salt Lake City, UT

2002 – 2019, Supervisory Hydrologist, U.S. Geological Survey, Salt Lake City, UT

Duties: Manage multiple projects as Principal Investigator and/or Project Lead including geophysical, hydrologic, and geographic specialty areas. Provide Science Center technical and supervisory support services for geophysical, GIS, remote sensing, publications, database, project-specific problems, marine-based operations, water quality, and facilities-related issues. Contribute to U.S. TAG for ISO Technical Committee 113, Hydrometry, and act as scientific consultant to the Great Salt Lake Technical Advisory Group and other Federal, State, and local cooperators on matters pertaining to Great Salt Lake and water-related studies. Represent USGS on various committees and organizations, and design and propose applications of acoustic methods for studying river and lake-bottom characteristics including multi-system integration. Propose and initiate cooperative work with other scientific agencies and universities. Represent USGS in local and overseas activities including Middle East Peace Process representative and as research co-investigator with Scripps Institution of Oceanography and The University of Nevada, Reno. Prepare agreements and memoranda between scientific agencies and represent the USGS at public meetings, international programs, and with the media. Develop new methodologies for scientific investigations and provide guidance and suggestions to the State Director on current issues affecting

USGS science and research programs in Utah. Provide consultation on and prepare satellite imagery for Science Center projects and reports, and design and validate new sampling and data collection procedures using various computer hardware and software. Manage publications workflow for the USGS Utah Water Science Center including proofing and editing of scientific reports. Act as senior-level science support for young scientists, providing ideas, developing project plans, training, and mentoring for young scientists. Prepare and conduct employee performance reviews, write/modify position descriptions, prepare/review budgets and approve purchases.

1991 – 2002, Hydrologist, U.S. Geological Survey, Salt Lake City, UT

Duties: Design data collection activities for Great Salt Lake and Utah Lake research including bathymetric data and physical water-quality parameters collection. Assist in the design and sampling of water-quality and limnological data collection for various projects and provide logistical and research applications for analysis of various data types. Act as Great Salt Lake Basins National Water Quality Assurance (NAWQA) Project database coordinator and GIS coordinator (since 1997). Responsible for database quality issues, responding to National Synthesis and National Leadership database update requests, data preparation and mapping, project-specific GIS work, and general support for the District. Involved with the USGS Western Region Management Development program and District operations and management. Responsible for preparation of project proposals, research, writing, review, and publication of U.S. Geological Survey reports.

1983 – 1991 - Hydrologist (Part-time while in Master's Program) - U.S. Geological Survey, Salt Lake City, UT

Duties: Responsible for research, writing, review, and publication of U.S. Geological Survey reports. Trained in Geographic Information Systems and mini- and micro-computer use. Measured surface-water flow, measured field water-quality parameters, collected water-quality samples, measured water levels, authored Salt Lake Valley Contamination Potential report, drafted thesis, and attended classes. Trained as U.S. Department of Interior Motor Boat Operator Certification Instructor.

Summer 1982 - Geophysical Technician - Winn and Associates, Houston, Texas

Duties: Prepared geophysical cross-sections, well-log data, and maps for analysis by geophysical consultants. Was taught basic sub-bottom geophysical section interpretation and correlation with other data sets such as well log data and cores. Provided consultant services on specific data-collection procedures for Arkansas / Tennessee / Missouri / Kentucky "Makit" gas prospect area.

1980 – 1982 - Party Manager - Western Geophysical Company, Houston, Texas

Duties: Managed 25 member Vibroseis geophysical exploration crew ("Party"). Specific duties included geophysical-survey planning and execution, equipment acquisition and maintenance, data quality assurance, obtaining and resolving public and private right-of way issues, managing personnel issues, budgeting, personnel evaluations, account reviews, crew training, and general crew production. Youngest person to be promoted to Party Manager in history of Western Geophysical, Inc., and top producer in Eastern U.S. in 1981. Multiple Western Geophysical Safety Awards.

1979 – 1980 - Field Clerk/Asst. Party Manager - Western Geophysical Company, Houston Texas

Duties: Responsible for reviewing crew plans and activities to ensure continuity in crew operations. Assisted in all aspects of geophysical-survey planning, data collection, quality assurance, and crew management. Was also responsible for keeping accounts and personnel issues in order, reviewing and submitting payroll, maintaining adequate supplies and equipment, program reviews, and operational troubleshooting.

Summers 1973 – 1978 - Houseman/Porter - Yellowstone Park Co., Gardiner, Montana

Duties: Supervised Housemen/Porters for lodging operation in Canyon Village, Yellowstone National Park, WY, ID, and MT., Drove delivery truck, re-stocked supplies, delivered baggage to guests, etc. Volunteered in Canyon Visitor Center as "Volunteer In Park" (VIP) and assisted Park Rangers during visitor guided hikes. Member of Canyon Village volunteer fire crew and "victim" during Ranger rescue training exercises.

Selected Publications:

- Brothers, D.S., Driscoll, N.W., Kent, G.M., **Baskin, R.L.**, Harding, A.J., and Kell, A.M., 2021, Seismostratigraphic analysis of Lake Cahuilla sedimentation cycles and fault displacement history beneath the Salton Sea, California: MS#GS2468 – Submitted to Geosphere July 12, 2021.
- Baskin, Robert L.**, Della Porta, Giovanna, and Wright, V. Paul, 2021, Characteristics and controls on the distribution of sublittoral microbial bioherms in Great Salt Lake, Utah: implications for understanding microbialite development: The Depositional Record, <https://doi.org/10.1002/dep2.159>. 09 July 2021
- Andrews, B.D., Baldwin, W.E., Worley, C.R., **Baskin, R.L.**, Denny, J.F., Foster, D.S., Irwin, B.J., Moore, E.M., and Nichols, A.R., 2018, High-resolution geophysical data collected in Lake Powell, Utah-Arizona, U.S. Geological Survey Field Activity 2017-049-FA: U.S. Geological Survey online data release, <https://doi.org/10.5066/P90BU2VS>.
- Kent, G., Schmauder, G., Maloney, J., Driscoll, N., Kell, A., Smith, K., **Baskin, R.**, and Seitz, G., 2016, Reevaluating Late-Pleistocene and Holocene active faults in the Tahoe Basin, California-Nevada: Applied Geology in California, Special Publication, Association of Environmental and Engineering Geologists, p. 833–85
- Kell, A. M., Sahakian, V. J., Kent, G. M., Driscoll, N. W., Harding, A. J., **Baskin, R. L.**, Barth, M., Hole, J. A., Stock, J. M., and Fuis, G. S. 2015, Understanding strain transfer and basin evolution complexities in the Salton pull-apart basin near the Southern San Andreas Fault: American Geophysical Union, Fall Meeting 2015, abstract id. T41A-2869
- Eisses, A.K., Kell, A., Kent, G.M., Driscoll, N.W., **Baskin, R.L.**, Smith, K.D., Karlin, R.E., Louie, J.N., and Pullammanappallil, S.K., 2015, New constraints on fault architecture, slip rates, and strain partitioning beneath Pyramid Lake, Nevada: Geosphere, v. 11, p. 683-704, [doi:10.1130/ges00821.1](https://doi.org/10.1130/ges00821.1)
- Baskin, Robert L.**, 2014, Occurrence and Distribution of Microbial Bioherms in Great Salt Lake, Utah: University of Utah, Ph.D. dissertation, 190 p., 47 figs.
- Maloney, Jillian M., Noble, Paula J., Driscoll, Neal W., Kent, Graham M., Smith, Shane B., Schmauder, Gretchen C., Babcock, Jeffrey M., **Baskin, Robert L.**, Karlin, Robert; Kell, Annie M., Seitz, Gordon G., Zimmerman, Susan, and Kleppe, John A., 2013, Paleoseismic history of the Fallen Leaf segment of the West Tahoe-Dollar Point fault reconstructed from slide deposits in the Lake Tahoe Basin, California-Nevada: Geosphere, v. 9(4), p. 1065, <http://dx.doi.org/10.1130/GES00877.1>
- Dong, S., Ucarus, G., Wesnousky, S.G., Maloney, J., Kent, G., Driscoll, N., and **Baskin, R.L.**, 2014, Strike-slip faulting along the Wassuk Range of the northern Walker Lane, Nevada: Geosphere, v. 10(1), p. 40-48, <http://dx.doi.org/10.1130/GES00912.1>
- Eisses, A.K., Kell, A., Kent, G.M., Driscoll, N.W., **Baskin, R.L.**, Karlin, R.E., Louie, J.N., and Pullammanappallil, 2012, A high-resolution seismic CHIRP investigation of structure and tectonic activity in Pyramid Lake, Nevada: SEG Technical Program Expanded Abstracts, <https://doi.org/10.1190/segam2012-0886.1>
- Belovsky, G.E., Stephens, D., Perschon, C., Birdsey, P., Naftz, D., **Baskin, R.**, Larson, C., Mellison, C., Luft, J., Mosley, R., Mahon, H., Van Leeuwen, J., and Allen, D.V., 2011, The Great Salt Lake Ecosystem (Utah, USA); long term data and a structural equation approach: Ecosphere, v. 2(3) art 33, March 2011, doi:10.1890/ES10-00091.12. *Online at* <http://www.esajournals.org/doi/pdf/10.1890/ES10-00091.1>
- Frary, R.N., Louie, J.N., Stephenson, W.J., Odum, J.K., Kell, A., Eisses, A., Kent, G.M., Driscoll, D.W., Karlin, R., **Baskin, R.L.**, Pullammanappallil, S., and Liberty, L.M., 2011, Recent faulting in western Nevada revealed by multi-scale seismic reflection: SEG Technical Program Expanded Abstracts 30: 1373-1377. *Online at* <http://pubs.er.usgs.gov/publication/70003857>
- Kell, A.M., Kent, G.M., Driscoll, N.W., Harding, A.J. and **Baskin, R.L.**, 2010, Seismic reflection study of the Salton Sea. SCEC Annual Meeting Proceedings and Abstracts XX, 181-181.
- Brothers, D.S., Driscoll, N.W., Kent, G.M., Harding, A.J., Babcock, J.M. and **Baskin, R.L.**, 2009, Tectonic evolution of

- the Salton Sea inferred from seismic reflection data: *Nature Geoscience* 2, 581-584. *Online at* <http://pubs.er.usgs.gov/publication/70037012>.
- Baskin, R.L.**, and Turner, J., 2006, Bathymetric map for the north part of Great Salt Lake, UT 2006: U.S. Geological Survey Scientific Investigations Map 2006-2954: 1 Plate [Map]. *Online at* <http://pubs.usgs.gov/sim/2006/2954/>
- Baskin, Robert L.**, 2006, Calculation of Area and Volume for the North Part of Great Salt Lake, Utah: USGS Open-File Report 2006-1359. *Online at* <http://pubs.er.usgs.gov/publication/ofr20061359>.
- Baskin, Robert L.**, 2005, Calculation of area and volume for the south part of Great Salt Lake, Utah: USGS Open-File Report 2005-1327. *Online at* <http://pubs.er.usgs.gov/publication/ofr20051327>.
- Baskin, R.L.**, and Allen, D.V., 2005, Bathymetric map for the south part of Great Salt Lake, UT 2005: U.S. Geological Survey Scientific Investigations Map 2005-2894: 1 Plate [Map]. *Online at* <http://pubs.usgs.gov/sim/2005/2894/>
- Waddell, Kidd M., Gerner, Steven J., Thiros, Susan A., Giddings, Elise M., **Baskin, Robert L.**, Cederberg, Jay R., and Albano, Christine M., 2004, Water Quality in the Great Salt Lake Basins, Utah, Idaho, and Wyoming, 1998-2001: U.S. Geological Survey Circular 1236. *Online at* <http://pubs.er.usgs.gov/publication/cir1236>
- Baskin, Robert L.**, Waddell, Kidd M., Thiros, Susan A., Giddings, Elise M., Hadley, Heidi K., Stephens, Doyle W., and Gerner, Steven J., 2002, Water-quality assessment of the Great Salt Lake Basins, Utah, Idaho, and Wyoming – Environmental Setting and Study Design: U.S. Geological Survey Water-Resources Investigations Report 02-4115. *Online at* <http://pubs.er.usgs.gov/publication/wri024115>
- Baskin, Robert L.**, 1998, Locating shoreline and submarine springs in two Utah lakes using thermal imagery: *in* Pitman, Janet and Carroll, Alan, eds., *Modern and Ancient Lake Systems – New Problems and Perspectives*: Utah Geological Association Guidebook 26, Salt Lake City, UT, p. 51-57.
- Baskin, Robert L.**, and Waddell, Kidd M., 1996, USGS Utah Water Resources Division Activities - 1996: U.S. Geological Survey Factsheet. Hardcopy only - out of print.
- Baskin, Robert L.**, 1996, Design and implementation of a spatial data management system for the Hill Air Force Base Environmental Management Directorate, Natural Resources Division: U.S. Geological Survey Administrative Report, April 1996.
- Baskin, Robert L.**, and Berryhill, Henry L. Jr., 1996, Geologic analysis of continuous high-resolution, seismic-reflection data from the Lincoln Point - Bird Island area, Utah Lake, Utah: U.S. Geological Survey Water-Resources Investigations Report 96-4236. *Online at* <http://pubs.er.usgs.gov/publication/wri964236>
- Waddell, Kidd M., and **Baskin, Robert L.**, 1995, USGS Utah Water Resources Division Activities - 1995: U.S. Geological Survey Factsheet. Hardcopy only - out of print.
- Spangler, Larry E., **Baskin, R.L.**, and Holmes, W.F., 1995, Hydrogeology and water quality of the Lincoln Point - Bird Island area, Utah Lake, Utah: *in* Environmental and Engineering Geology of the Wasatch Front Region, Utah Geological Association Publication 24, William Lund, editor. *Available through AAPG at* http://archives.datapages.com/data/uga/data/066/066001/i_ugs66i.htm
- Baskin, Robert L.**, 1995, Field Tests of a Real-Time Differential Global Positioning System: Paper presented at USGS - GPS Conference, Denver, Colorado, January 20, 1995, Unpublished paper - for internal use only, presented by Larry Hothem, USGS – NMD.
- Baskin, Robert L.**, Spangler, Lawrence E., and Holmes, Walter F., 1993, Physical characteristics and quality of water from selected springs and wells in the Lincoln Point - Bird Island area, Utah Lake, Utah: U.S. Geological Survey Water-Resources Investigations Report 93-4219. *Online at* <http://pubs.er.usgs.gov/publication/wri934219>
- Anderson, Paul B., Susong, David D., Wold, Steven R., Heilweil, Victor M., and **Baskin, Robert L.**, 1993, Hydrogeology of recharge areas and water quality of the principal aquifers along the Wasatch Front and

adjacent areas, Utah: U. S. Geological Survey, Water Resources Investigations Report 93-4221. *Online at* <http://pubs.er.usgs.gov/publication/wri934221>

Waddell, Kidd M.; Gerner, Steven J.; Thiros, Susan A.; Giddings, Elise M.; **Baskin, Robert L.**; Cederberg, Jay R.; and Albano, Christine M., 2004, Water Quality in the Great Salt Lake Basins, Utah, Idaho, and Wyoming, 1998-2001: USGS Circular 1236. *Online at* <http://pubs.er.usgs.gov/publication/cir1236>.

Baskin, Robert L., 1992, GPS finds its place on the Lake: GPS World, May 1992.

Jaggi, Sandeep, Quattrochi, Dale A., and **Baskin, Robert L.**, 1992, Algorithm for the estimation of upper and lower bounds of the emissivity and temperature of a target from thermal multispectral airborne remotely sensed data", Proc. SPIE, 1699, Signal Processing, Sensor Fusion, and Target Recognition, 420 (July 9, 1992); doi:10.1117/12.138250. *Abstract Online at* <http://dx.doi.org/10.1117/12.138250>

Baskin, Robert L., 1990, Selected factors related to the contamination potential of the principal aquifer, Salt Lake Valley, Utah: U.S. Geological Survey, Water Resources Investigations Report 90-4110, reprinted in 1996. *Online at* <http://pubs.er.usgs.gov/publication/wri904110>

Baskin, Robert L., 1990, Determination of ground-water inflow locations in Great Salt Lake, Utah, using the Thermal Infrared Multispectral Scanner: Master's Thesis, University of Utah, August, 1990.

Whelan, J.A., **Baskin, R.**, and Katzenstein, A.M., 1989, A water geochemistry study of Indian Wells Valley, Inyo and Kern Counties, California – Volume 1 – Geochemical study and Appendix A: U.S. Naval Weapons Center Technical Publication 7019 – Volume 1, UNCLASSIFIED, 88p.

Whelan, J.A., **Baskin, R.**, and Katzenstein, A.M., 1989, A water geochemistry study of Indian Wells Valley, Inyo and Kern Counties, California – Volume 2 – Appendixes B through G: China Lake, CA, U.S. Naval Weapons Center Technical Publication 7019 – Volume 2, UNCLASSIFIED, 255p.

Seiler, Ralph L. and **Baskin, Robert L.**, 1988, Hydrology of Alkali Creek and Castle Valley Ridge Coal-Lease Tracts, Central Utah, and Potential Effects of Coal Mining: U.S. Geological Survey, Water Resources Investigations Report 87-4186. *Online at* <http://pubs.er.usgs.gov/publication/wri874186>

Pyper, George E. and **Robert L. Baskin**, 1985, Evaluation of Methodologies Used in Determining Crop Acreages and Consumptive Water Use, Tooele Valley, Utah: U.S. Geological Survey, Water Resources Administrative Report – For internal USGS use.

Selected Presentations, Abstracts/Posters, and Invited Presentations (~last 10 years):

Baskin, Robert L., Wright, V.P., Driscoll, N., and Kent, G., 2017, Great Salt Lake, Utah; A Natural Laboratory for Assessing Potential Geobody Dimensions, Reservoir Architectures, and Controls in Lacustrine Carbonate Systems: American Association of Petroleum Geologists Annual Convention and Exhibition, Houston, Texas, April 5-7, 2017, Poster presentation.

Baskin, Robert L., 2016, Distributions and Environmental Controls of Microbialites in Great Salt Lake, Utah: American Association of Petroleum Geologists Annual Convention and Exhibition, June 22, 2016, Calgary, Canada, Presentation.

Baskin, Robert L., 2016, Microbial Bioherms in Great Salt Lake, Utah – The Newest Frontier: 2016 Great Salt Lake Issues Forum, May 11, 2016, Invited presentation.

Baskin, Robert L., 2016, USGS Laboratory Data Rescue Project: Rescuing the Irreplaceable: 10th National Monitoring Conference, May 2, 2016, Tampa Florida, Invited presentation.

Baskin, Robert L., Driscoll, N.W. and Wright, V.P., 2013, Microbialite Distribution in a Lacustrine Rift Basin; Great Salt Lake, Utah: 62nd Annual Meeting of the Rocky Mountain Section of the American Association of Petroleum Geologists, Salt Lake City, Utah, September 22-24, 2013, Invited presentation.

Baskin, R.L., Driscoll, N.W., and Wright, V.P., 2013, Controls on Lacustrine Microbialite Distribution in Great Salt Lake, Utah: Microbial Carbonates in Space and Time, Geological Society of London, June 19-20, 2013,

Invited presentation

Baskin, Robert L., 2013, The Benthos of Great Salt Lake, Utah; Who Knew?: American Fisheries Society, Utah Chapter, Page, AZ, March 26-29, 2013, Invited presentation

Baskin, Robert L., Wright, V.P., Driscoll, N., Kent, G., and Hepner, G., 2013, Microbial Bioherms in Great Salt Lake, Utah: Influence of Active Tectonics and Anthropogenic Effects: AAPG/SEPM Hedberg Research Conference on Microbial Carbonate Reservoir Characterization, Houston, TX, June 3-8, 2012, Invited presentation

Baskin, R.L., and Wright, V.P., 2011, Tectonic and anthropogenic controls on microbialite bioherms in Great Salt Lake, Utah: BG Group Student Forum, Reading, UK, October 13-14, 2011, Invited presentation.

Baskin, Robert L., 2011, Great Salt Lake; Topography and Structure in the Vicinity of the UPRR Causeway: Governor's Council on Great Salt Lake, Salt Lake City, UT, June 1, 2011, Invited presentation.

Baskin, Robert L., Driscoll N.W., and Wright, V.P., 2011, Lacustrine Microbialites in Great Salt Lake; Life in a Dead Lake: Lacustrine, Non-Marine and Microbialitic Carbonates and Reservoirs II, AAPG 2011 Annual Convention & Exhibition, Houston, TX, April 10-13, 2011, Abstract and Poster, Abstract ID-1071603.

Baskin, Robert L., 2011, Methods for Surveying Large Rivers: Moab Valley Fire and Rescue personnel, Moab Valley Fire Department Offices, Moab, Utah, October 18, 2011, Invited presentation.

Baskin, Robert L., 2011, The unseen world of Utah Lake: 7th Annual Utah Lake Symposium, Utah Valley University, October 25, 2011, Invited presentation.