

Dr. Barbara Vasquez

Colorado 2005-2026:

Now retired from her first three careers (scuba diving, biomedical research, semiconductor research & development), Barbara moved to northern Colorado, to the North Platte River basin (Jackson County) with a goal of giving back to the landscape, wildlife and people in her new home.

Her highest priority was to engage on public lands and water issues, branching out to other areas of natural resource management and making positive contributions over the past 21 years. She was nominated to serve as the Environmental Representative to the North Platte Basin Roundtable by The Nature Conservancy and has served continuously in that position since 2006. She has served as the Inter-Basin Compact Committee (IBCC) representative from the North Platte Basin for the past two years. In March 2023, she was appointed to represent the North Platte River Basin on the Colorado Water Conservation Board (CWCB) and reconfirmed for a 3year term in March 2024.

Regarding public lands management, she has served on three resource advisory councils/committees for the BLM and the USFS. She was appointed to the BLM's Resource Advisory Council for Northwest Colorado by the Secretary of Interior and served for 7 years, the final year (2017-18) as Chair. During her tenure on the BLM RAC, she served in an advisory role to the NW District of the BLM, developing a good understanding of the various issues and stakeholder positions regarding the management of natural resources for multiple uses on the West Slope and in the state of Colorado. As an appointee to the USFS Resource Advisory Committee for the Medicine Bow-Routt National Forest for 5 years, she helped direct funding decisions to support forest management and watershed projects. In 2022 she was appointed to the newly formed, novel, multi-forest USFS Greater Rocky Mountain RAC which covered the entire states of Colorado and Wyoming. She served as Vice Chair until the RAC was shut down in 2025. These positions have provided her the opportunity to influence decisions on public land management in Colorado.

In 2017, Dr. Vasquez joined Western Colorado Alliance (WCA) and has served continuously on their Oil & Gas Campaign, advocating for better protections of communities and environment from impacts of extraction on both public and private lands.. In 2019, when the Colorado Oil and Gas Commission (now the Energy and Carbon Management Commission) held rule-making hearings to reform their management of the industry in the state, her testimony with the attorney supporting WCA was fundamental to convincing the Commission to end routine venting and flaring. Since then, with the campaign team, she has continued to advocate for protections for communities, wildlife and taxpayers during rulemakings on financial assurances and cumulative impacts.

Also in 2017, Dr. Vasquez joined Great Old Broads for Wilderness. She a co-leader of the Northwest Colorado Broadband (NW CO BB). She engaged members of the NW CO BB in walking parcels of land in Jackson County that were proposed for BLM Colorado 2018 lease sale to gather data on surface conditions and evidence of wildlife use to inform comments to justify withdrawal of the parcels. She has served the national office as a resource with expertise on oil and gas issues and worked with them to include the GOB in legal interventions in oil and gas issues on public lands. Recently she has served on both the Advocacy and Science Committee and became a member of the Broads' Board in 2024.

For Dr. Vasquez, the nexus between water quantity and quality with oil and gas extraction has been a constant focus. One problem common to most surface waters in the state is the absence of baseline data on contaminant levels of oil and gas hydrocarbons. From 2011 to 2014, she worked with USGS on a project to collect water and sediment samples at various locations in the North Platte River headwaters. Funding for that work came from private donations to match the funding from the USGS. That publicly available data provides such a baseline. She has continued that work with Dr. Joe Ryan, UC Boulder, under a small 501(3)(c) North Park Community Foundation for which she is President with funding from the Wolcott Family Foundation.

Regarding water quantity, we all recognize that climate change makes every drop count in the arid west. In 2023, following the passage of HB23-1242, Dr. Vasquez was appointed to the Colorado Produced Water Consortium. The goal of the legislation is to reduce the amount of fresh water used downhole in oil and gas development. Many deep, horizontally drilled wells use up to 24 million gallons of fresh water to complete (hydraulically fracture) a single well. Produced water is recovered in variable amounts from oil

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and gas wells with the hydrocarbons but is treated as a waste product and primarily disposed of by reinjection deep underground. So that water is taken out of the planetary water cycle forever. The role of the Consortium is to advise the ECMC on rulemaking and the legislature on potential additional legislation to increase the reuse and recycling of produced water by industry for their downhole operations. The ECMC engaged in rulemaking on produced water and Dr. Vasquez, with WCA support, participated as a party in that rulemaking. It is now providing guidelines to oil and gas operators in the state with increasing targets over time for declining fresh water use for fracking.

Western Colorado Alliance is a member of the national network organization Western Organization of Resource Councils. In 2018 Dr. Vasquez became a representative of WCA on the WORC oil and gas campaign, stepping up as Chair in 2019, a position she still holds. WORC not only supports member organizations in their local grassroots work, but also gives us a voice at the national level.

In 2022, Dr. Vasquez became a member of the Board of Directors for both Western Colorado Alliance and Western Organization of Resource Councils. Her work with these organizations over the past seven years has been focused on advocacy for more balanced management of public lands and protections for public health, environment and wildlife during oil and gas development and production.

In August 2019, Dr. Vasquez was appointed to a four-year term on the Colorado Transportation Commission to represent District 6 (Jackson, Routt, Grand, Moffat, Rio Blanco, Clear Creek & Gilpin Counties). In addition to representing the district, she has worked tirelessly with a small subcommittee on the recently approved Green House Gas Emission Reduction planning rules. She has also championed increased integration of wildlife crossing structures in road construction projects to minimize vehicle-wildlife collisions and improved wildlife connectivity. Her term ended July 1, 2023 shortly after she began her term on the Colorado Water Conservation Boards.

PRIOR PROFESSIONAL EXPERIENCE

During the last 23 years of her career in the semiconductor industry as a creative engineer and leader, she demonstrated geographical and cultural flexibility as well as effectiveness in managing both manufacturing and R&D. She held positions with increasing levels of responsibility in Asia, Europe and the US. She negotiating complex research and development contracts between companies, where leadership by influence and persuasion was critical to success.

2002-2005 Vice President, FormFactor (Livermore, CA)

Dr. Barbara Vasquez served as Vice President of New Product Development for Form Factor Inc. for over 3 years. She and her group of research and development engineers had responsibility for the innovation, development and productization of advanced probe cards and other solutions for testing semiconductors before assembly and packaging.

1999-2002 Senior Director, Infineon (Munich, Germany)

As Senior Director of Integrated Assembly and Test at Infineon (previously Siemens Semiconductor), she built an R&D team of 40 engineers to develop and implement wafer level package, wafer level test and wafer level burn-in for Memory Products. Locations included Munich (base), Regensburg and Dresden. The group worked intimately with other companies (suppliers as well as competitors) on joint development. Negotiation of these joint development contracts including critical intellectual property issues was an important part of her leadership role.

1996-1999 VP, ProMOS (Hsinchu, Taiwan)

Her first assignment with Infineon was as VP Technology and Product Engineering in the start-up of ProMOS, a joint venture DRAM factory between Infineon and the Taiwanese company Mosel Vitelic. She built the engineering team from the ground up, hiring and managing a multi-national team of 80 engineers. A critical element of success in this role was culturally sensitive leadership, creating an environment in which Asian and Western engineers and managers worked effectively and succeeded together.

1983-1996 Senior Director, Motorola (Austin, TX & Phoenix, AZ)

Dr. Vasquez worked in several capacities in both manufacturing and R&D at Motorola Semiconductor from 1983-1996 in Phoenix, AZ and Austin, TX. She was responsible for establishing a program for known-

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good-die technology development, including wafer level burn-in, and developed an industry-wide reputation as an expert in the field. She also had responsibility for wafer equipment & factory development as Motorola prepared for the transition from 200mm to 300mm wafer production. Previous areas of responsibility at Motorola included wafer manufacturing and advanced bipolar and BiCMOS device development.

Career-long intellectual property productivity

Dr. Vasquez's creativity and productivity are evidenced by more than 25 published papers resulting from both biomedical research and semiconductor research and development. She has more than 40 issued patents in various areas of semiconductor device structures, test methods and IC packaging. She was also active on patent committees in several companies that had the responsibility for deciding on filing disclosures and broader directions for intellectual property portfolios. (List of patents and publications available on request.)

1976-1983 Basic Biomedical Research

Dr. Vasquez established a career in biomedical science before joining the semiconductor industry. Following her PhD and a Postdoctoral Fellowship, she worked for seven (7) years in biomedical research devoted to diabetes and obesity research at the National Institutes of Health. She published over 35 papers in the field. (List of papers available on request.)

EDUCATION

She completed her BS in Chemistry in 1968. After 4 years of teaching scuba diving full-time, she turned her attention back to formal education and earned a PhD in Biochemistry at Arizona State University in 1976. A NIH Fellowship sponsored her research on the structure and regulation of an enzyme in purine metabolism (hypoxanthine-guanine phosphoribosyl-transferase) that is defective in the Lesch-Nyhan syndrome which causes severe mental retardation and self-mutilation in boys carrying two defective genes for the enzyme.

PERSONAL

Barbara's recreational pursuits include hiking, backpacking, horseback riding, scuba diving and travel. Her quieter hobbies including reading, music and cooking. She is the mother of two grown children and three grandchildren.