



BRADY and ASSOCIATES

Geological Services

California Professional Geologist# 5741

Stream Restoration ♦ Engineering Geology ♦ Resource Exploration ♦ Field Mapping ♦ Geoarchaeology

American River Flood Control District
Board of Directors
185 Commerce Circle
Sacramento, CA 95815

Dec. 11, 2024

Dear Board of Directors:

With this letter, I would like to be considered for a position on the ARFCD Board of Directors, serving a two-year term. I understand how important (essential) well-designed and maintained levees are to the Sacramento area. As a Professional Geologist, I believe I can bring valuable experience to the organization, and am eager to learn from the existing Board and Maintenance Division.

I am an Emeritus Professor of Geology at CSU-Fresno where I taught Engineering Geology, Watershed Hydrology, Stream Restoration, and Landslide Analysis and Control, for 29 years. Throughout, as a licensed Geologist,, I maintained an active consulting business in watershed issued, mining exploration, and geo-archaeology in which I abided by contracted budgets and scope of work, and deadlines.

While in Fresno, I designed and implemented a number of watershed restoration projects involving local agencies, businesses, graduate students, and local high schools, all of which were funded by grants I authored. One project in Visalia, funded by the California Department of Water Resources, received their Outstanding Project of Year Award. I was also the site supervisor (and excavator operator) on a major, stream daylighting project at the Presidio grounds Crissy Field restoration which is now part of San Francisco Tunnel Top Parks.

After leaving CSU-Fresno, I moved to Portland where I was employed as an Engineering Geologist with AMEC Earth and Environmental Inc. to work on slope stability and stream stabilization and restoration projects. I served on the City of Portland Technical Advisory Committee (TAC), helping to design and oversee projects on the Willamette River, and consulted with the City Parks Department on Best Management Practices for Tryon Creek (Park).

Presently, I am the Vice President of the Sacramento Area Creeks Council, and volunteer on at least two, clean-up events each week along local waterways (Site lead for Steelhead Creek). I am presently retired (aside from consulting) so have time to dedicate to contributing to the Board.

I am dependable, resourceful, and work well in collaborative settings including in the field. I also know how to operate on a budget and have a strong, grant-writing record. I respect the opinions of others, and know how to compromise when needed.

Attached to this email is my resume of engineering and watershed-related projects; if you care to see other projects, I will be glad to provide that detail. References are available upon request.

I hope you will give my application favorable consideration. I look forward to hearing from you.

With very best regards,

Roland H. Brady III
Roland H. Brady III, Ph.D., P.G.





ROLAND H. BRADY III, PH.D.

California Professional Geologist #5721

**Watershed Restoration, Applied Geology/Geophysics, Exploration
Geo-archaeological/Paleontological Assessment**

SUMMARY

Roland Brady is a licensed, professional geologist with over 30 years of experience in engineering geology, watershed restoration, marine geology, neotectonics, applied geophysics, mineral exploration, technical writing, field mapping, and geo-archaeology while an employee or consultant to the private sector or to state and federal agencies. His work has taken him from the Arctic and outer reaches of the Alaskan Aleutian Islands through much of the western US, Mexico, Central America, and Chile working from research ships, helicopters, horse back and on foot. Roland received his Ph.D. researching the origins of fault-controlled sedimentary basins, and served as a US Peace Corps volunteer doing mapping in Patagonia and consulting with the Chilean National Park Service. He has taught undergraduate and graduate geology courses at Portland State University and Lewis and Clark College in Portland Oregon, and was a tenured Professor in the Geology Department at California State University-Fresno where he received the Provost's Award for Excellence in Teaching.

EDUCATION

Ph.D., Geology and Geophysics, University of California, Davis (1986). Dissertation: Tectonics, stratigraphy, and geophysics at the intersection of active fault zones, Death Valley, CA

B.S., Geology, Sonoma State University, California. (1976)

B.A., Earth Science Education, Sonoma State University, California. (1974)

CORE SKILLS

Project Management and Business Development: grant and proposal writing, market development budgeting, client relationships, project implementation and personnel supervision, field project oversight.

Watershed Restoration:

Design and implementation of watershed restoration/habitat improvement projects. Specializing in community-based efforts including cooperative projects with citizen groups and schools. Erosion and control.

Engineering Geology/Geophysics:

Mapping landslides and analyses of slope stability, engineering geological mapping, seismotectonic studies, borehole and trench logging, structural analyses, shallow exploration geophysics (refraction, magnetics, gravity, GPR).

Mineral/Energy Exploration:

Base and precious metals and geothermal field exploration and geophysics.

Geoarchaeology/Paleontological Assessment:

Stratigraphy, applied geophysics, lithic provenance, soil and landform evaluation.

Technical Writing:

Excellent technical writing, professional editing skills. Taught technical writing and edited for professional journals.

Languages:

Level 5 fluency in Spanish.

EXAMPLE EXPERIENCE AND PROJECTS

WATERSHED ASSESSMENT AND RESTORATION:

- **Consultant:** Stream-bank stabilization project design, Chicken Ranch slough, Sacramento. (3 projects)
- **Project Lead:** Pilot project using draft horses to remove large and heavy objects from Steelhead Creek, Sacramento, CA. Project funded through a grant from Sacramento Regional Sanitation Department.
- **Co-Principal Investigator:** California Energy Commission grant to research and write geologic and baseline study guidelines for permitting solar power plants in desert watersheds.
- **Engineering geologist/geomorphologist:** Preliminary study for constructing sustainable restoration reach of Fancher Creek, Fresno County.
- **Geologist:** Technical Advisory Committee. Upper San Joaquin River Watershed Assessment Group. Citizen's group volunteer.
- **Geologist:** Technical Advisory Committee. Willamette River Restoration Program, balanced cut-and-fill regulation forum. City of Portland, OR.
- **Site Foreman:** Constructed wetlands and boulder-cascade channel restoration. Montanera subdivision, Orinda CA. Supervised crew of 6, operated heavy equipment, surveying. Contracted by Watershed Sciences, Aromas.
- **Engineering geologist:** Trouble shooting urban bank stabilization project. Berkeley, CA. Contracted by Watershed Sciences, Aromas.
- **Geologist:** Sourcing fine sediment contamination and mitigation plan. Tryon Creek State Park, OR.
- **Site Foreman:** Stream daylighting and channel restoration, Park Presidio, San Francisco, CA. Construction supervisor, Crissy Field restoration. Funded by National Park Service contract to Watershed Sciences, Aromas.
- **Geologist:** Alpine meadow re-watering assessment and habitat enhancement, Big Meadow Creek, Sequoia National Forest, Tulare Co., CA. Geomorphic and hydrologic baseline study and restoration plan. Funded by US Forest Service and local conservation/fly fishing organizations.
- **Engineering geomorphologist, Project Supervisor:** Urban waterway enhancement plan, Enterprise-Holland canal, Fresno County, CA. Organized and directed graduate course with students and faculty from Departments of Geology, Biology, Civil Engineering, Political Science, and Economics. Students and faculty developed plans and cost analyses for project implementation. Included community coordination, surveying, hydrology, hydraulics, revegetation and irrigation layout.
- **Geologist, Project Supervisor:** Fluvial geology and engineering impacts, La Honda Creek, Highway 84 transportation corridor, San Mateo County, CA. Collaborative project with the San Francisco Estuary Institute for habitat and transportation planning. Involved extensive channel mapping, surveying, materials inventory, and hydrology. Supervised graduate thesis. Funded by CalTrans and Department of Fish and Game.
- **Engineering geomorphologist, Project Supervisor:** Urban habitat restoration and flood control project, Mill Creek, City of Visalia, Tulare County, CA. Designed and implemented project including extensive grading, hydrology, revegetation, bio-engineered bank stabilization, irrigation, community relationships. Supervised graduate thesis and crew of at-risk high school students. Funded by California Department of Water Resources.
- **Project Supervisor:** Experimental control of scarlet wisteria *Sesbania punicia*, San Joaquin River, Fresno County, CA. Surveyed, mapped, and undertook statistical analyses of experimental methods to exterminate invasive bush. Undertaken with at-risk students from two, local high schools. Funded by Pacific Gas and Electric and National Fish and Wildlife Service.
- **Engineering geomorphologist, Project Supervisor:** Sediment control and desert spring re-watering, Red Rock Canyon State Park, Kern County, CA. Field study including piezometer installation, habitat monitoring, geomorphic surveying, erosion modelling, engineering design, spring restoration plan. Contracted by California Department of Parks and Recreation.
- **Engineering geologist:** Bank bio-stabilization and restoration design, Wildcat Creek, Kennedy Plaza Park, City of San Pablo, Contra Costa County, CA. Contracted by Urban Creeks Council of California, Berkeley. Designed landslide stabilization, stream routing, revegetation.

- **Geologist, Project Supervisor:** Bio-technical stream bank stabilization, McKenzie Creek-Table Mountain Preserve, Fresno County, CA. Designed and installed revetment; revegetation. Involved university undergraduate students and at-risk students from local high schools. Funded by US Fish and Wildlife Service.
- **Geologist, Project Supervisor:** Conceptual restoration design for degraded dredger mined lands, Merced River, Merced County, CA. Organized and directed project with students and faculty from Departments of Geology, Biology, Civil Engineering, Political Science, and Economics. Developed restoration plans and cost analyses. Involved public surveys, field surveying, hydrology, aggregate mining assessment. Contracted by California Department of Fish and Game.
- **Geologist, Project Supervisor:** Groundwater monitoring and revegetation plan, Camp Pashayan, San Joaquin River, Fresno County, CA. Surveyed and mapped locations for revegetation; installed and monitored piezometers. Funded by San Joaquin River and Conservation Trust and Bay Institute.
- **Project Supervisor:** Revegetation design and implementation, Ratzlaff reach, Merced River, Merced County, CA. Designed and installed revegetation and protection. Included surveying, revegetation, and mapping. Included at-risk high school students. Contracted by Calif. Department of Water Resources and Department of Fish and Game.
- **Project Supervisor:** Tamarisk removal, revegetation and bank stabilization plan, Panoche-Silver Creek, Fresno County, CA. Surveying, mapping, project design. Funded by local almond growers association.

ENGINEERING GEOLOGY/GEOPHYSICS:

Engineering Geologist. AMEC Earth & Environmental, Inc., Portland OR. Project management, field supervision, proposal writing, marketing, technical review.

Professor. Taught Engineering Geology, Landslides, Engineering geophysics, California State University-Fresno.

Project Geologist. Woodward-Clyde Consultants, San Diego, CA. Conducted field mapping and sub-surface investigations for quarry siting, slope stability, beach cliff erosion, foundation characterization, seismic stability.

Marine Geological Technician. US Geological Survey, Marine Branch aboard research vessels operating in Gulf of Alaska and California borderland. In charge of sampling, deck operations. Logged and x-rayed cores, collected and interpreted sparker, magnetometer, sonar, uniboom, 3.5 MHz data.

Slope Stability Projects:

- Slope stability assessment and mitigation recommendation, City of Troutdale, OR.
- Geotechnical analysis of failed retaining wall and slope, City of Troutdale, OR.
- Rock slope mapping and Markland stability analyses at the USACE Hensley dam spillway, Madera County, CA.
- Origin of recent, large landslide, San Joaquin River canyon, Fresno County, CA. For California Department of Fish and Game.
- Map and determine triggering mechanisms for massive rotational slides at Point Reyes National Seashore and debris flows in Death Valley, CA.
- Map and model movement rates for compound landslides threatening county roads in Fresno County, CA.
- Field and geophysical analyses of several damaging debris flows on US Forest Service land in the Sierra Nevada, CA.
- Review of geological/geotechnical analyses of lethal debris flow near areas Santiago Chile.
- Stream-side slope stability and stabilization plan, Highway 84 transportation corridor, San Mateo County, CA. Detailed engineering mapping for transportation design.
- Origin of accelerated beach cliff erosion, San Diego, CA; Nisqually River delta, Olympia WA. For private development.

Seismo-tectonic Projects:

- Neogene faulting and tectonics, southern Death Valley area to Bristol Mountains, CA. Included satellite image and aerial photo analysis; field mapping; geochronology; tephrochronology; gravity, seismic refraction, magnetic, paleomagnetic studies. (1982-2003)

- Tectono-stratigraphic analysis of northern Carpinteria fault zone, Santa Barbara, CA. Included aerial photo interpretation, analysis of trench and boring logs, seismic refraction. (2000)
- Analysis of the Clovis Lineament, Clovis CA. Detailed structural mapping, sense-of-shear indicators in mylonite, trenching, groundwater level interpretation, gravity surveying. (1999)

Engineering Geophysical Projects:

- Neutron density study, cattle trampling in meadow environment. Big Meadows, Sequoia National Park. (2006)
- Seismic refraction study, upper San Joaquin River, Fresno County, CA. To locate groundwater monitoring wells; additional channel mapping and surveying. Involved undergraduate students. Contracted by US Bureau of Reclamation and Bay Institute (2001).
- Electrical resistivity study of groundwater recharge, California State University, Fresno. For university plant operations. (1999)
- Gravity and seismic refraction studies of active faults: Soda Lake lineament, San Bernardino County, CA. (1995). Garlock fault, Death Valley CA (1984). Clovis lineament, Fresno County, CA. (1994)

Drilling and Sampling Projects:

- Completed numerous projects involving hollow-stem, reverse circulation, coring. Logging oriented core, cuttings, drive samples, trenches. Geotechnical and geochemical rock and soil sampling.

Other Projects:

- Geological site conditions of historical building, City of Fresno, CA. Contracted by Fresno Historical Society. (1999)
- Origin of damaging groundwater seep, City of Selma, CA. Involved soil augering, geophysical survey. Contracted by private landowner. (1993)

EXPERT WITNESS for plaintiff and defense:

- Grading permit violation and origin of in-channel landslide, San Joaquin River for California Department of Fish and Game.
- In-stream gravel mining permit violation, Phoenix, AZ. For Cemex, Inc., quarry operator.
- Review of geotechnical and seismic study for sewer replacement, City of Belvedere, Marin County, CA. For Woodward-Clyde, Consultants.
- Forensic mineralogy for murder cases (two cases). For State of California.
- Analysis of river bank modifications related to personal injury claims (two cases). For California Department of Parks and Recreation.