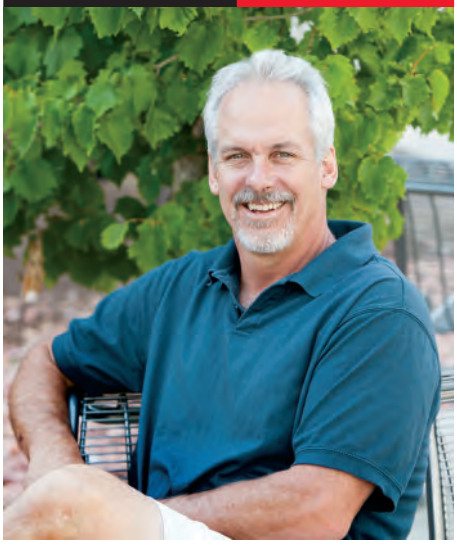
John Rice: Seepage Is His Forte



When John Rice entered Humboldt State University in his native California, he didn't really know what he wanted to study. He took a geology course he really liked and decided to begin his career there, but when he graduated in 1984 the economy was such that it was not a good time for job hunting. So he went on to Utah State University (USU) in Logan, Utah, where he earned an M.S. in civil engineering with an emphasis in geotechnical engineering.

After working in geotechnical engineering for 16 years, first at Kleinfelder and then at Woodward-Clyde Consultants, he earned his Ph.D. at Virginia Tech in Blacksburg, Va., where he worked with Michael Duncan, distinguished professor emeritus.

Duncan tells about his unusual connection with Rice. He says he was caught off guard some years back when Rice approached him about pursuing a Ph.D. under his advisement. Duncan noted Rice's age, which was 43, saying Rice was a successful consultant. He told Rice "if you switch to academia, you won't get anywhere, and you'll be working for people who are 20 years younger than you." But Rice persisted, says Duncan and thrived.

Today he is "one of the preeminent U.S. researchers in the area of internal erosion" in dams, according to David Paul, special assistant for Dam Safety, U.S. Army Corps of Engineers (USACE). Among other attributes, Paul cites Rice's experience in dam and levee assessment combined with his research skills and his understanding of the profession's needs. Paul says Rice has a special perspective, and his work on the USACE's new manual under development, "Seepage Control Cutoffs for Dams and Levees" is exemplary.

Seepage and Erosion

Paul cites the many problems in rough cutoffs in Kentucky, saying "they are unique and hard to quantify limestone bedrock problems with seepage and erosion — there are a lot of unknowns." In fact, seepage and piping failure modes are most common, requiring structural modifications such as installing seepage cutoffs for remediation. Paul says Rice is "able to convey technical concepts in terms others can readily understand, plus he has a strong background in analyzing and solving complex tech issues."

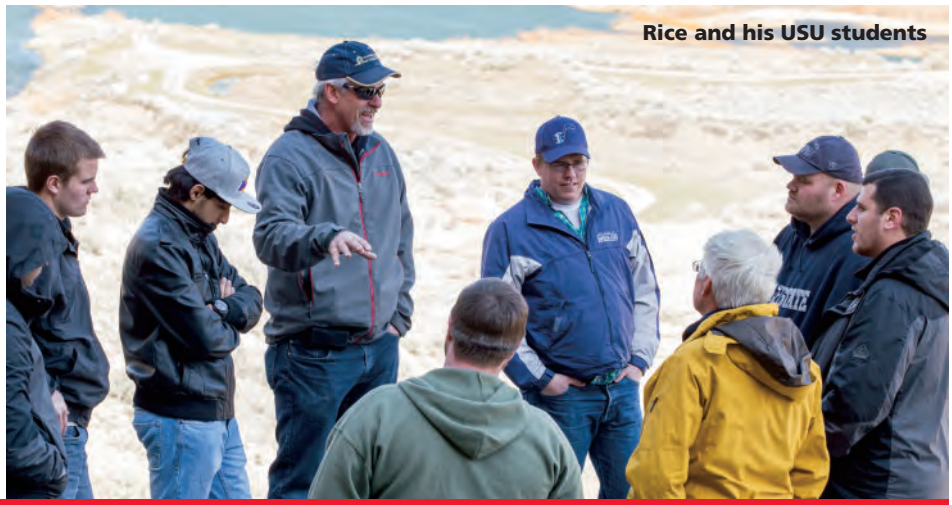
Brian H. Greene, of Gannett Fleming in Pittsburgh, Pa., is another Rice fan. He notes that Rice is director of the Earth Structures Lab within the civil and environmental engineering department at USU, which is heavily involved in the performance of cutoff walls in earthen embankments. "Clearly," says Greene, Rice is a current "leader in research on the behavior of seepage cutoff walls."

Fulbright Award

Rice will work in the Netherlands next year under a four-month Fulbright Grant, and is very busy putting together a "patchwork quilt" of grants and funds for work on that nation's extensive levee system. He will also collaborate with some of the top researchers on seepage and internal erosion in the Netherlands.

Seepage is his forte, says Rice. One memorable project he worked on in his early days involved spending 16 days in Thailand working with the Electricity Generating Authority of Thailand (EGAT). The project included a series of eight saddle dams associated with one of the largest dams and reservoirs in the country. They had a seepage and slope stability problem that they were unsure how to manage. He is in the process of assembling a group of US experts to return to Thailand to provide guidance and training to improve the capabilities of the local dam engineers. In July, he and his team are proposing to conduct a training workshop for EGAT employees to help them understand the risk assessment analysis methods his team proposes.

After the Fulbright commitment, Rice will also spend some time in Greece, where his wife's father has a house. She is a landscape architect herself and hopes to learn more about land use and social policies when they are in the Netherlands.



Rice and his USU students

AUTHOR *Virginia Fairweather*

The Deep Foundations World

Rice is very active in the industry. Duncan introduced Rice to the United States Society on Dams (USSD), where he is on the Levee and Construction Committees and the board of directors. Paul was the catalyst for getting Rice involved in DFI where he is a member of the DFI Seepage Control Technical Committee.

Rice likes working with DFI Trustee Gianfranco Di Cicco and other institute members. He says they "help keep him in tune with the deep foundations world, and he can bring this information back to his students at USU."

Rice teaches a graduate-level course in ground improvement at USU. He enjoys situations where he can talk first hand with contractors, and see how USACE works, for example, on cutoff walls. He points out that local projects, such as the terminal expansion at the Salt Lake City airport, offer additional teaching opportunities.

Rice sees teaching and research at the University as his main priority, saying "you can overdo extra work outside." Rice thinks that doing too much freelance work can make one ineffective as a teacher and researcher. USU limits such work to three days per month. On the other hand, Rice feels that being active in outside consulting is important to stay up to date on the state of the practice and allows him to keep his teaching and research relevant to current practice.

Clearly, John Rice is a fortunate man. He is deeply involved in his field and in being so, helps solve problems that can deeply impact large populations.