

Making a Difference with a Different Career

Peter McRae, a current director and former president of IECA's Western Chapter, wasn't supposed to be making a career of controlling soil erosion—much less trying to coax grass to grow on the side of a road through a high mountain pass in Montana or introducing the use of “triple fraction” stable humus technology to establish vegetation in the searing heat of the Mojave Desert of California.

Instead, the New Zealand native, who also lived as a youth in British India and Singapore during the 1950s, was pegged by his uncles as a city boy. They owned a cattle and sheep station in the high country New Zealand's South Island, and they saw McRae pursuing more urbane interests. After all, he played rugby in the country's major metropolitan area, while earning double degrees in business and law at Victoria University of Wellington. In fact, McRae practiced law as a barrister and solicitor of the Supreme Court of New Zealand for a few years.

“The last thing my uncles ever dreamed was that I'd be involved in this fascinating, multidisciplinary field of erosion control,” he says.

But, that was before McRae attended the law faculty at the University of British Columbia, Canada, under a Rotary Graduate Fellowship scholarship. “Like many other college graduates at the time in the former British Empire, the idea was to embark on a three- to five-year overseas experience,” he recalls. “I never made it home.”

Instead, in 1979, he moved to the West Coast of the United States, where he's lived ever since. At one time his professional work involved project financing of oil and gas reserves and drilling rigs for clients



Peter McRae,
Quattro Environmental

operating in Texas and Alaska, oil reserve financing for an investment funds manager, and project financing for a master-planned community residential developer in Southern California.

Going Native

McRae traces his change in careers to a stint of pro bono legal research he was doing for a local citizen's group near San Diego, California, opposing a state construction project that threatened to destroy that group's neighborhood. The residents succeeded in stopping the project. In the meantime, one of the community leaders introduced McRae to the difficulties of getting plants to grow in less-than-ideal conditions, along with a new product for conserving soil moisture.

“I originally thought that the native revegetation industry was a pleasant reprieve from the adversarial and high-pressure workplace of litigation, investment securities, and high-stakes financing,” he says. “By contrast, here were people who

were less contentious yet passionate about trying to grow plants. It was fun. I became intrigued by the challenges of re-establishing sustainable native plant growth in harsh environments. I've since learned that our industry has its fair share of battles.”

So, in 1993, McRae started a company, Quattro Environmental, to tackle those challenges. Based in Coronado, California, the firm works with a consortium of multinational corporations as well as long-standing family-owned businesses in California and the Pacific Northwest to manufacture a comprehensive range of revegetation products that enhance the ability of soils to support plant growth.

“We are a full-service environmental research, manufacturing, and marketing company specializing in re-establishing native plant growth on drastically disturbed soils in harsh environments throughout the Western US,” explains McRae.

The company's primary product is DownUnder LSM. He describes it as a custom-blended “living soil membrane,” which features patented organic acids technologies and a protein-rich food source for microorganisms. “It sets the stage for the natural re-establishment of site-specific bacteria, fungi, protozoans, nematodes, and related soil microorganisms to nurture and sustain native plant species in sterile soils,” he says. “Rather than a *recipe of products*, the DownUnder LSM is a *recipe of approach* that works just as successfully at the 8,000-foot altitude on the Beartooth Pass Scenic Highway in Montana, as well as in the blast-furnace



Site of revegetation project at the Hyundai Motor Corporation's Proving Track in the furnace-like environment of California's Mojave Desert illustrating conditions before and after the use of Quattro Environmental's recipe of approach for restoring sustainable native plant growth.



heat of California's Mojave Desert, or the western front of the Cascade Range of mountains in Oregon."

A Fascinating Challenge

McRae's work in the field of erosion control is no less satisfying for him today than when he left the courtroom nearly two decades ago.

"Initially, I was attracted by the potential for making a positive difference in an industry that, for all the knowledge we possessed about plants, was seemingly incapable of successfully implementing a sustainable revegetation effort on sterile soils in harsh environments," he says.

"This led to a fascination with the multidisciplinary team effort required to restore functioning soil communities. Inexplicably, that challenge has been largely ignored by our profession, despite being critically essential to achieving revegetation success in the field."

McRae sees many promising opportunities for professionals who can develop certain core technologies that, when implemented properly, could overcome many of the current limitations in producing successful revegetation results in severe environments.

"Meeting these challenges requires teamwork by talented, multidisciplinary

professionals who possess a common devotion to excellence," McRae says.

His attraction to this industry also is reinforced by the importance to society of combating erosion. "By some accounts, previously flourishing societies have failed because people have inadvertently destroyed the environmental resources on which their societies depended," McRae says. "Deforestation and habitat destruction, soil problems—erosion, salinization, and soil fertility losses—and water management problems can lead to societal collapse. We are no longer the backwater industry we once were. There is no shortage of challenges in the erosion control field."

To advance more effective use of vegetation in meeting these challenges, his company helped found the Native Plants Alliance (NPA), a network of scientists, project designers, seed suppliers, and contractors. Working as a team, NPA ensures that best management practices are used for each unique site, he reports.

Finding Balance

Meanwhile, McRae has been doing his part to help IECA meet the many challenges of controlling erosion by providing professional educational and networking opportunities. Since joining IECA 18 years ago, he has served the association and the

industry as an active member of the Western Chapter. Drawing on his legal experience, he took on the task of incorporating the chapter in February 1996. Four years later he joined the chapter's board of directors, where he continues to serve as chair of the Communications Committee and editor of the chapter's newsletter. He was chapter president from 2007 to 2009.

Why does McRae serve IECA and the industry in this way? "For the fun of it," he replies, "and because I believe in the goals of the association and especially those grass-roots goals of our chapter."

Like just about every IECA volunteer, he has had to find an effective balance between the time he spends on association work—from stuffing flyers in envelopes and licking stamps to devoting several weeks almost exclusively to produce a successful chapter workshop or conference—and his own livelihood.

His solution was to limit his initial commitments of time. He joined the board originally to help on one-time special projects rather than serving in a role, such as treasurer, that requires ongoing activities.

"Whether the chapter is putting on an event like a field day or a four-day conference, the enthusiasm of the volunteers working as a team definitely fuels the sense of satisfaction derived from the gathering being judged a success," he says. "With experience, you also learn how to do various chapter tasks more efficiently, allowing you to complete projects in a fraction of the time it once required."

A Team Approach

Among the accomplishments the chapter has achieved during McRae's service as a director was hiring an administrative assistant, which had been a chapter goal for a number of years.

The chapter's inaugural regional conference held in Hawaii in 2006 was a milestone, too. "That was another dream that came to fruition and was very successful, again because of an overwhelming team effort by chapter members dedicated to expanding our training capabilities to the far reaches of our chapter regions," he says.

Also, building on his passion for pushing the technology envelope on native plant revegetation, McRae led the chapter in conducting a series of four uniquely

formatted technology transfer workshops focused on improving technologies for establishing native plants. The first was held in the summer of 2008. "These workshops have been well-received because of the high-caliber expertise donated by leading academics interacting with experienced IECA member professionals on a mission to bring about change. By introducing a debate-charged, call-to-arms atmosphere, the resulting discussions and learning opportunities sweep one along for an exhilarating educational ride," McRae says.

Such achievements, he emphasizes, start with individual IECA members having a dream of an idea. "IECA provides a team framework that allows you to make a difference by being heard," he says. "But, first, you have to get involved. Then, the rest will follow."



Beartooth Pass:
Success of the company's approach for re-establishing native vegetation to control erosion at 8,000 feet above sea level in the Rocky Mountains of Montana

