

Ronald B. Linsky 1934-2005

Special Issue



Ronald B. Linsky

Visionary. Optimist. Leader. Advocate. Those are just some of the words used by friends and colleagues to describe Ronald B. Linsky, Executive Director of the National Water Research Institute (NWRI). His life-long dedication to water and water research was respected by many throughout the field. It will be difficult, if not impossible, to find another person who was as passionate and enthusiastic as Ron about the world of water.

Ron passed away on August 14, 2005, of myelodysplastic syndrome, a bone marrow ailment, at the University of Southern California Norris Cancer Center. He was 71.

"This is a tragic loss not only to the water community, but to all those who knew and worked with Ron," stated NWRI co-founder, Mrs. Joan Irvine Smith. "He truly made a difference with his innovative ideas and boundless energy. His contribution to water research and reliability are immeasurable."

As the Executive Director of NWRI for the past 15 years, Ron was responsible for overseeing an institute dedicated to supporting cooperative research to create new sources of water and to protect freshwater and marine environments. Under his leadership, NWRI grew into the third largest water research institute in the United States.

"Ron was the most creative and innovative leader I have known in the water, science, technology, and health business," said Washington D.C.-based water and health consultant Joseph Cotruvo, Ph.D. "He could think across many disciplines and see relationships that others missed. He saw opportunities, took chances, and made decisions that made NWRI an organization with impacts far beyond its size. He made NWRI a step apart from its colleague organizations because he eliminated the 'box'

rather than just think outside of it."

Ron became Executive Director of NWRI in 1991, the same year that the institute was founded in Orange County, California, by a group of Southern California water agencies in partnership with the Joan Irvine Smith & Athalie R. Clarke Foundation. In fact, Ron was asked to apply for the directorship said William Mills, former General Manager of the Orange County Water District, who served on the recruitment committee to find NWRI an Executive Director at that time.

"Ron was the clear choice of the committee and of NWRI's governing board," Mills said. "He had a strong background in water and was well-known by many. He was also very energetic, and just bubbled over with enthusiasm to get the institute going."

According to Mills, NWRI struggled its first few years, but soon enough built an excellent reputation because of Ron's ability to work with others and leverage funds. In fact, Ron was able to double NWRI's research budget every year by requiring that matching funds be provided by joint-venture research partnerships. Through these partnerships, NWRI supported over 160 water-related projects, focusing on the areas of exploratory research, treatment and monitoring, water quality assessment, and knowledge management.

"Ron brought a lot of credibility to Orange County and its ability to do research," added Mills. "NWRI not only has a local flavor, but it has national and international prestige as well. That was a significant legacy, to build a credible research institute in Orange County where nothing had existed prior. To start one from scratch and build it to what it is today was a remarkable accomplishment."

One aspect of NWRI that Ron was always proud of was the fact that is an "institute without

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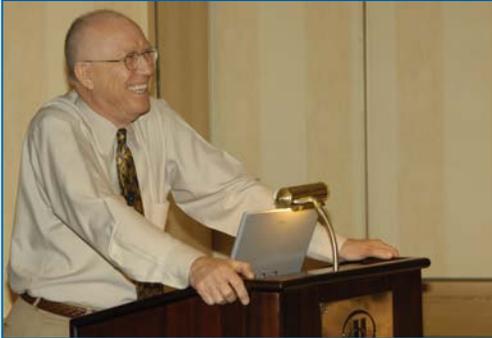
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Ron Was Dedicated to Water Research

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walls,” a unique concept in the U.S. because, unlike most other research-oriented agencies, NWRI focuses on supporting research activities where the best and brightest researchers are found. In other words, NWRI does not conduct the research itself, but rather seeks out and funds those to conduct the research for it.



Ron at one of NWRI's Nominal Group Technique workshops.

“NWRI doesn't have a big, fancy building or hundreds of people on staff,” said John B. Withers, Chair of NWRI's Board of Directors. “It's located in a little corner of the Orange County Water District and only has four staff members, yet it's one of the most important water research institutes in the nation. The force behind NWRI isn't its look, but what it can do. Ron encouraged ideas and research. He'd even take on the wild ideas that no one else would try. He had an energy and optimism that was unique, and he looked at life in general in terms of what is possible as opposed to why it can't work. He'd find the talent and make things happen.”

One of Ron's earliest projects with NWRI included traveling to Oman on behalf of the U.S. State Department and Ministry of Foreign Affairs in Muscat, Oman, to help establish the Middle East Desalination Research Center (MEDRC) for the express purpose of furthering peace in the Middle East and North Africa through a cooperative effort in solving water problems.

Desalination expert David Furukawa, P.E., Ch.E., who traveled to Oman with Ron, recalled: “One of the charges was to put together a state-of-the-art report on water purification and desalination. Another charge was to hold a workshop to get input from all potential member nations. Representatives from all key nations were invited to the workshop — Palestine, Israel, all the Arab nations, plus North African nations. At our hotel in Oman, Ron and I had personal bodyguards 24-hours a day. There were snipers around the hotel, as well as metal detectors, armed guards, and food tasters to prevent poisonings. At one point, Ron — with his typical humor — asked me, ‘Is this supposed to keep us in or the bad guys out?’”



Ron with Clarke Prize Laureate and long-time RAB member, George Tchobanoglous.

According to Furukawa, MEDRC is still successfully funding multi-national research projects and is the only remaining active leg of the Multi-Lateral Peace Process.

Ron was very much the visionary when it came to supporting new technologies in the water arena. For instance, he “recognized early on the advantages that microfiltration could provide the drinking water industry, then took it to wastewater and reclamation,” said Samer Adham, Ph.D., of MWH. “He was one of the early adapters of a technology that would change the industry.”

Beginning in 1994, NWRI hosted a series of conferences that brought leaders of the industry together into one room to talk about microfiltration, a water treatment technology that has seen momentous growth and acceptance over the last 10 years.

“Ron was consistent, like a train,” said Adham, “and he kept on having conferences every 4 years to stay on top of the technology. Then a new development in the technology came up: membrane bioreactors. So Ron incorporated it into his research agenda. He knew it was a breakthrough technology that would enhance wastewater treatment and make reuse more safe and

efficient. He wanted membrane bioreactors to be highlighted in NWRI's fourth microfiltration conference, which will be held in March 2006.”

Another technology that Ron championed was riverbank filtration, a predominately European drinking water treatment process, by holding two international conferences to introduce riverbank filtration to the U.S., as well as co-editing a 364-page textbook — the first of its kind — on its state-of-the-art as practiced on two continents. Ron had also planned to introduce this low-cost technology to developing nations by holding an NWRI-sponsored conference in China in 2006.

“Ron was very supportive of implementing riverbank filtration in China, India, Korea, and many other populated countries where it is needed the most,” said riverbank filtration expert Chittaranjan Ray, Ph.D.,



Ron with NWRI co-founder, Mrs. Joan Irvine Smith.

of the University of Hawaii. “We will work hard to implement riverbank filtration in the developing world, and it will be considered Ron’s legacy.”

Perhaps the most important project that Ron worked on at NWRI was not about a technology, but rather was a message — one that, throughout the world, Ron was most often identified with. He was an advocate of the value of water. In his own words, he believed that: “We have to rethink the costs, price, and benefits of water. We have to throw into this an element called the value of water. We need to look at water as an asset that provides services to the people who consume the water. If we invest in the *true* value of water, we can maximize the use and value of our water assets.”

To Ron, the value of water wasn’t just in the cost of treating it. The value of water was in the ability to enjoy a day at the beach. It was in the ability to drought-proof a region.

Or it was the ability to purchase a product — like a newspaper or pair of jeans — that could not be manufactured without water.

“Ron was a crusader,” said Ron’s best friend, David Hsu, M.D. “He’d drive all over Southern California — or travel halfway across the world — to talk about the value

of water. I’d tell him that he’d talked about it hundreds of times already, but Ron would say, ‘Yes, but we still have to talk about it because it takes a long time to bring this into the mindset of not just the consumer, but also of the people in the industry. They all think about the science — the treatment of the water — but no one thinks about the value of the water.’”

Ron had planned on writing a book about the value of water. NWRI intends to take on this labor of love over the next year and publish it in his memory.

Undeniably, Ron’s enthusiasm for water and water-research was boundless. He was a pioneer in the water industry — a man with big ideas and the drive to pursue them. Many people will remember him for his role in advancing water science. What they might not know is that, behind the scenes, one of Ron’s greatest passions was education.

A former high school teacher, Ron believed that it is essential to support and encourage young people who are interested in water science. Whether that was through giving out awards at science fairs or in sending kids to Water Camp, Ron made sure that NWRI took an active role in educational outreach programs. He loved to invite secondary school students to dinner to meet experts in the water

industry at NWRI’s Research Advisory Board meetings. Whenever a young person called asking for an internship or scholarship to help attend a water festival, he immediately made arrangements to help them out. He was also proud of the fact that NWRI was supporting more and more graduate fellowships each year. In 2005, there were nine Fellows total.

Education was so important to him that his family has decided to establish a Ronald B. Linsky Fellowship in support of NWRI’s graduate fellowship program. The Joan Irvine Smith & Athalie R. Clarke

Foundation will also contribute to this special fellowship to memorialize Ron.

“This fellowship,” said NWRI Fellowship Committee member Gill Geesey, Ph.D., of Montana State University, “along with other student fellowships established through Ron’s leadership at NWRI, will ensure that his vision of the value of water will be

passed on to future generations of student scientists, engineers, and economists throughout the world.”

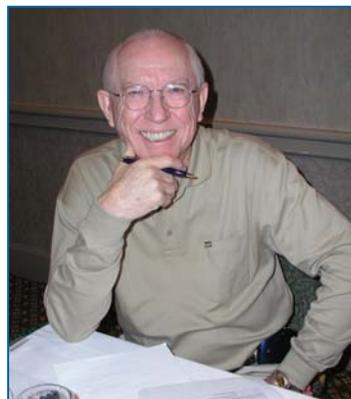
It’s almost impossible to describe how difficult Ron’s passing has been for NWRI. However, one of his favorite sayings was, “Go forth and do great things.” And that’s what NWRI intends to do.

Thank you, Ron, for everything — the time you spent with us, even when you were ill; your endless knowledge and encouragement; your enthusiasm; and, most especially, your kindness and thoughtfulness to all those around you. We will miss you so much!



Ron with his wife, Patricia Linsky.

In memory of Ron’s love of education, his family – with contributions from The Joan Irvine Smith & Athalie R. Clarke Foundation – will establish a fellowship in support of graduate students through NWRI’s fellowship program.



Remembering Ron Linsky

Editor's Note: NWRI received so many memories of Ron Linsky following his death that it was not possible to include them all in this newsletter. However, you may read all the memories at NWRI's website, www.NWRI-USA.org, by clicking on "In Memory of Ron Linsky."

Any memory of Ron comes back to his smile and the fun he had doing everything. The smile was the same from the first time I met him through the last time I talked to him.



Ron with late RAB member and desalination pioneer, Jack Jorgenson.

When Ron gave his favorite "value of water" talk at the 2004 Eastern Washington Water Summit, he upstaged the second day's keynote speaker, U.S. Senator Mike Crapo, by just being Ron. Weeks after the Summit, I ran into people who were still talking about Ron's enthusiasm and wit, as well as his message, and most didn't even remember Senator Crapo at all. But the

best part was at dinner the night before. I took Ron to Spokane Club, where he fell in love with the club's special potato dish and tried to talk one of the servers into moving to California to stem the tide of Californians moving to Washington. That was a twist I hadn't heard before. And I know Ron remembered the potatoes more than the conference.

Ron was a friend and mentor. I'm amazed at how often I think of little things he told me and how much fun we had every time we talked.

~ CRAIG RILEY

Washington State Department of Health



Ron had a special way of connecting with people, whether a Research Advisory Board member or the door attendant at the hotel. Effective leaders have this ability. I will always remember how Ron would greet me with that sparkle in his eye, that wonderful smile, and exuberance in his voice as he said, "Stanley! How are you?" In the course of the conversation, he would put his arm on my shoulder and say, "Let me tell about this idea I have and how we can work together." His passion was contagious. Ron truly cared about people and was an expert at developing collaborative relationships. I learned a lot from Ron over the years. A part of Ron will always be with me, and I hope to model some of the behaviors he lived by.

~ STAN PONCE

United States Geological Survey



One of my fondest memories is from a couple of years ago. I was having a miserable time that winter shaking a persistent cough. Ron came to see me

about something else and told me that he knew just what I needed to get better. He took me over to May Garden and bought me a bowl of soup that he said would help me heal. The warm soup, hot tea, and Ron's enthusiasm about whatever we needed to talk about (I can't remember the topic, just Ron's kindness) really did help me feel better. I don't know if the soup did the trick, but shortly after that event, I did kick the cough. I will always be grateful for Ron's thoughtfulness and friendship.

~ MIKE WEHNER

Orange County Water District



I remember the first time I met Ron, which was over a decade ago. It was at a horse ranch in Southern California, and we were having an NWRI meeting under a tent canopy. What a wonderful setting that was and what a terrific friendship was begun. Ron was, as usual, full of enthusiasm, bubbling over with ideas and seeking even more. What impressed me most — then and since — was his ability to cut through bureaucracy and get things done. This enabled him to make the great many contributions he did in the world of water. I miss Ron very much, but have confidence that the pathways he started will forge ahead and the quality of life of many people will be better for it. This, then, will be Ron's legacy.

~ GARY WESTERHOFF

Malcolm Pirnie, Inc.



Ron's response to almost any idea was, "Let's do it ... we'll have fun." Most opportunities for projects, partnerships, and conferences were met with this kind of exuberance. In Ron's view of NWRI, and probably of life in general, the purpose and joy lie in finding and doing things that will add to your store of knowledge and experiences. Learning things was fun, experiencing things was fun, going places was fun. "Let's do it ... we'll have fun" — I can still hear his voice saying it, and I hope I always will.

~ BILL BLOMQUIST

Indiana University-Purdue University Indianapolis



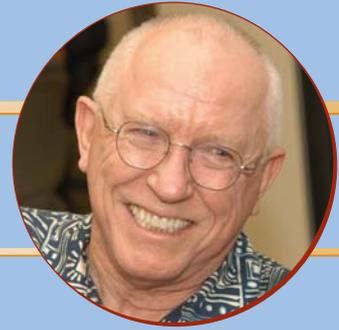
Ron will always be with us. I cannot and will not forget the twinkle in his eye, his mischievous smile, his sharp wit, his passion for life, and his tremendous intellect and insight — along with his many significant contributions to the National Water Research Institute, to the world's research community, and to our water environment.

~ DAVID YORK

Florida Department of Environmental Protection

The Life of

Ron Linsky



Part One

Ron Linsky lived an amazing life. He was a “bio-politician” and a self-taught oceanographer. He had traveled around the world and under the seas. He had a story for everything.

You always learned something from Ron — he was a fount of knowledge, no matter what the topic. He’d even draw you a picture upside down to help illustrate his point, if needed!

A modest man, Ron didn’t brag about his accomplishments. He’d drop hints, but only if it pertained to something he was telling you. Consequently, not many people knew what he was like — and what he had done — outside of NWRI.

We wanted to share his remarkable story. It’s a compilation of interviews, newspaper articles, old resumes, personal letters, and a short autobiography that Ron once wrote about himself. We think you’ll be surprised by the man you meet here. We were, and we worked with him everyday.

Uptown Ron

Ronald Benjamin Linsky was born in the middle of the Great Depression on June 16, 1934, in Los Angeles, California. His father, Walter, was a Polish immigrant who spoke seven languages and had a flair for storytelling. Ron once described his father as a man who could talk to anyone anytime and make them feel good about themselves. That trait must have rubbed off, because that’s how many felt about Ron as well.

His mother, Helen, was an aficionado of the opera and ballet. It was through her that Ron developed a passion for music. As a child, he learned to play the piano and, as an adult, he loved to listen to classical music (especially while sitting outside in his garden, bird book and binoculars in hand). Some of his friends and colleagues might remember how he would catch the attention of a



crowded room by singing. He wasn’t shy at all about his musical inclinations.

Ron grew up in what is now South Central Los Angeles. NWRI Board Member Norman Eckenrode, who was raised in nearby Watts, fondly remembered that he and Ron used to have an ongoing joke about their modest beginnings: Norm would teasingly call him “Uptown Ron” while Ron would call him “Downtown Norm.”

Did You Know?

One of Ron’s secret desires in life was to conduct an orchestra. The other was to be a matador in a bullring — challenging a small bull.

Life during that time period, however, wasn’t easy for anybody. According to Ron’s childhood friend, Mike Punaro, “Those were the days of 50-cent double features with Tom & Jerry cartoons, Flash Gordon serials, and *Movietone Newsreels* featuring President Franklin D. Roosevelt speaking about the war effort. It was a time when ‘The Greatest Generation’ went off to Europe and the Pacific to protect our shores, and there was rationing of meat, sugar, and gasoline.”

World War II affected Ron all throughout his younger years, starting in elementary school. In the sixth grade, he was chosen along with three other students to run an agriculture program at his elementary

school to raise food for the cafeteria during the war years. In addition to caring for a vegetable garden, he also helped raise cows, sheep, and chickens, which meant he had to be at school early and stay late, plus work on the weekends. Even as a child, he threw himself into his job.

His efforts paid off in an unusual way: “Ronnie became a radio celebrity,” said Punaro. Because of his work with the agricultural program, Ron was selected to attend the Art Linkletter House Party radio broadcast, which aired at noon every weekday. It was a huge honor, recalled Punaro, “and all the other students in the school went to the auditorium that day to hear the broadcast.”

No doubt, this was Ron’s first moment in the limelight. It certainly wouldn’t be his last.

From High School to Spy School

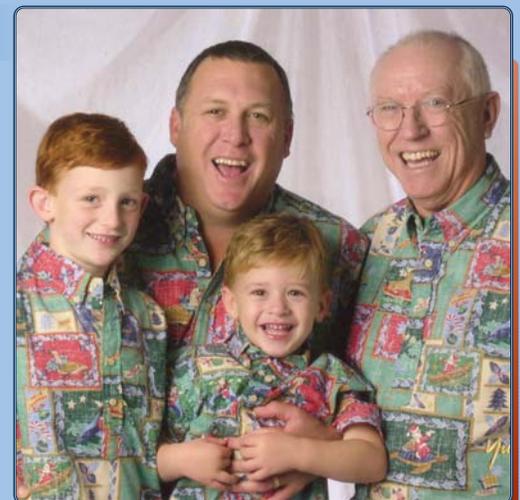
Growing up, Ron had a lot of hobbies and interests. For one, he was an avid reader, and Rudyard Kipling was his favorite poet and author. He also kept a growing autograph collection (he lived next to Hollywood, after all) and took up flying on the weekends in small commuter planes with his neighbor, a pilot. It was from this experience that he developed a life-long love of airplanes. In his later years, he collected models of airplanes that he had actually traveled on — his office at NWRI was filled with them.

Papa Linsky...

One of Ron’s greatest joys in life was his grandchildren, and he was lucky enough to see two of his grandsons on a weekly basis. Red-headed Jake, now 8, was the athlete while little Evan, only 4 and a half, shared Ron’s love for dinosaurs, birds, bugs, and all sorts of animals.

“Papa,” as the boys called Ron, loved to watch Jake’s team sports. Together, they’d also go to *Mighty Ducks* hockey games at the Pond, see the *Angels* at bat, or scream “Fight on!” at USC football games. At home, however, Ron would always take the boys into the garden. He’d say to his son, Bryan Linsky, “I’m going to teach your kids to cuss and spit and get dirty and be boys.”

Of course, the garden was Ron’s private Eden. He could spend all day outside pruning and tending his plants, especially his bonsai trees. The boys could be boys, but there was no messing with the flowers!



Life Imitates Art...

Ron loved to read: mysteries and Clive Cussler action novels were favorites. But Rudyard Kipling was his literary hero. Amazingly, if you compare Ron's adventures in life to Kipling's action-adventures, you'd see a lot of similarities. Kipling wrote about exotic locales in the *Jungle Book* and *Just So Stories for Children* – Ron once lived and worked in tropical jungles, and was no stranger to traveling to far-away places like India, China, and the South Pacific. Kipling's works celebrated the common soldier, and one novel was even about a spy. Ron loved his time spent in Okinawa, where he was stationed as an army "spy" in his youth. Kipling also wrote seafaring tales like *Captains Courageous*, and his famous poem, *Gunga Din*, was about the most important soldier in battle – the one who carried the drinking water. In the battle against waterborne disease and drought, Ron, too, was a soldier, fighting hard to ensure there was safe, clean water for all. In a world where life sometimes imitates art, Kipling must have made a huge impression on Ron as a child – or else Ron simply recognized a kindred spirit.

Both Ron and his older brother, Walter, were athletic in high school. However, all it took was for people to ask Ron "Why don't you play football like your brother?" to keep him from playing the sport. Ron wasn't a follower – he was his own person. So he played baseball and basketball instead (he was 6'1"). Still, he loved to learn, and his favorite subjects were science and history.

The Collector's Eye...

Ron was an avid collector. Coins, Chinese teapots, Chevron cars, and artwork from around the world were among his many interests. He also loved Hawaiian shirts – in fact, he owned over 75 of them. But his favorite collector's items were stamps, which satisfied his love for history and geography. "Ron was a big-time philatelist, specializing in stamps from Australia, New Zealand, and England," said his wife, Patricia. "Often, the first place that we would stop at when we traveled overseas was the Post Office!"

After graduating from high school in 1952, Ron decided to go to college. At first, he didn't quite know what he wanted to do in life. His original plan was to be a dentist, but he realized it just wasn't the career for him. Then a professor of his at the University of Southern California (USC) suggested he study biology.

"Ron was a very curious person, and biology appealed to him because it was about the relationships between man and the world," said his wife of 26 years, Patricia Linsky.

Schooling, however, was put on a hold when Ron volunteered to join the army. He spent the next 21 months as a private in the Army Security Agency and learned to speak and write Russian at "spy school."



After completing basic training in Ft. Devins, Massachusetts, Ron was assigned to a base in Okinawa, Japan, where he interpreted messages as a "Teletype Interceptor." He ended up being discharged for medical purposes after coming down with appendicitis, though he completed his 8-year service through the army reserve.

Said his wife, Patricia, "At the time of his discharge, Ron couldn't divulge what he did, though he liked to say he was a spy. He loved being in the army."

Bats on the Brain

When Ron returned to USC, he continued his studies in biology, earning both his B.S. and M.S. degrees at the same time. He worked odd jobs to support his way through school, from working in a grocery store, where he cut up cheese, to earning a scholarship as a

Teacher's Assistant in Anatomy, where he cut up cats instead. He was also given the opportunity to conduct research abroad. His choices were to either study whales in the Arctic (where it was cold) or to study rabid bats in

the tropics (where it was warm). Warm won. In 1961, he spent 3 months in the jungles of Costa Rica on an NSF-sponsored expedition investigating the origin and distribution of rabies virus in Central American bats. Armed with a butterfly net, camera, and gun, he helped capture nearly 1,000 bats, which ranged from 25 different species, for research purposes. One vampire bat had a 48-inch wingspan and teeth a fourth of an inch long!

Probably the scariest moment on the expedition was when the research team members discovered via official letter that the rabies vaccine they'd

taken to prevent contracting the fatal disease had only been effective for one person – lucky Ron Linsky. They didn't receive this crucial warning until after they'd been handling the rabid bats for some time.

Ron loved his experience in Costa Rica and hoped to return



there soon. This was not to be, however, because once he graduated from USC in 1962, he immediately was hired as a science teacher at Westminster High School in Westminster, California.

As a teacher, he was known for his love of playing chess and sharing slides of Costa Rica. He once told a student reporter that he

became a teacher to "transfer his excitement to his students," and he was responsible for more than one ingenious idea to make school an exciting place.

Most, if not all, of these ideas revolved around helping

students to better appreciate science and research. For one, he was advisor of BRAINS, a club that arranged lectures by scientists – like the project director of the U.S. Mars probe – to encourage an interest in science.

He also spearheaded a project in which students, divided into groups, conducted science experiments in an area of interest to

A Whale of a Tale...

Ron may have passed up an opportunity to study whales as a grad student, but that didn't mean he didn't love these leviathans of the deep. In 1983, he published a short book about whales entitled *The Whale's Way* as part of his small business, *Things Marine*.

them. No tests were given throughout the school year, but each group was required to give a periodic review to other classmates on the experiments they had been conducting. Grades were determined by the class after the review. In many ways, it's exactly what NWRI's principal investigators do nowadays when they are granted research project

funding and must provide periodic reviews to the NWRI Research Advisory Board!

Ron's best idea, however, was yet to come. It started with a summer school course in marine biology and exploded into a career-altering venture into oceanography.

Mini Marine Biologists

In 1963, Ron decided to try something new. He offered to teach a summer school class in marine biology. At the time, it was the only class of its kind in the county, as well as the only class offered to regular high school students in Southern California (meaning, it wasn't restricted to honors students).

Forty-four students attended the first class. One of those students was Kris Lindstrom, who ended up becoming the very first member of NWRI's Research Advisory Board years later.

"I was anticipating a career as a marine biologist," recalled Lindstrom, "and my mother was willing to drive me to summer school some 15 miles away and make the two trips a day to give me this opportunity. Taking Ron's class launched my education in marine sciences and started a life-long friendship that provided numerous opportunities to collaborate on projects and share our ideas and enthusiasm for life, travel, stamps, investing, and furthering the concept of the value of water."

As part of the marine biology class, students set out as early as 4 a.m. to attend various field trips, including places like local tide pools or the Scripps Institute of Oceanography in La Jolla, California. They used nets, specimen jars,



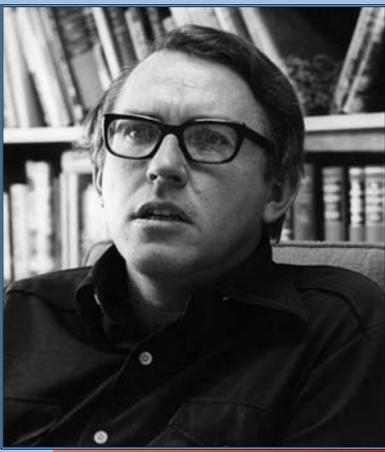
and other equipment to collect flora and fauna along the coast. The community helped out, too, by donating marine specimens to the students, including 500 specimens from one man alone in Huntington Beach. In fact, Ron's students collected so many specimens

School Ties...

Ron's first principal at Westminster High School was a man named Paul Berger. They remained close friends throughout the years and, over the last decade, Ron acted as Paul's campaign manager for the position of Trustee at Orange Coast Community College in Orange County, California.

that some were later donated to the University of California, Irvine (UCI) — a new campus at the time — to jumpstart its museum collection.

The excitement for this summer school class began to build momentum. So did Ron's status at the school district. Over a 5-year period, he went from biology teacher to Chairman of the Science Department at Westminster and Fountain



Valley High Schools, as well as President of the District Education Association in the Huntington Beach Union High School District. He also became a research assistant at UCI, working in Back Bay Newport, and served on the Accrediting Commission for the Western Association of Schools and Colleges, which was considered an honor.

In his last year with the district, he was even asked to organize and open the science department of a new high school.

Then, in 1967, he was offered a job that changed his life forever. He became the Coordinator of Marine Sciences for the Orange County Department of Education in Santa Ana, California. That's when he conceived the idea for the Floating Laboratory Program, a federally funded project that drew thousands of landlubbers to the sea to learn hands-on marine science.

All Aboard the Floating Lab

Its catchy theme was "Think Wet!" Its purpose was to allow children to actively participate in real marine science — which meant they went to school at sea.

In fact, it was Ron's hope that the Floating Lab would give children a positive

A Tale of Two 'Biologists...

Lifelong friends, Ron Linsky and Kris Lindstrom first met when Lindstrom, then a teenager, enrolled in Ron's summer school class in marine biology. "Ron and I really hit it off that summer," said Lindstrom, "and we ended up playing a lot of chess and drinking hot chocolate together on class breaks."

After class, they'd sometimes hop into Ron's Volkswagen bug to go on mini field trips to collect and observe marine specimens. Other times, they'd hunt bats — Ron's favorite. "Ron taught me the benefits of keeping field notes," said Lindstrom, who still has all his notes from that summer class filed away in neat, detailed journals. "He treated me like a real researcher, even though I was only a kid."

Their mutual love of marine science kept their friendship strong even after Lindstrom completed Ron's class. A few years later, when Lindstrom was an undergraduate at UCI, he came to Ron for a summer job on the Floating Lab.

It was on the Floating Lab that they started catching fish with tumors. Ron and Lindstrom began a letter-writing campaign to local congressmen and the Regional Water Quality Control Board about their concerns regarding a possible connection between diseased fish and the Orange County Sanitation District's nearby ocean outfall. Then, Ron helped put together evidence and presented it at congressional hearings in Orange County, which resulted in an investigation. "The congressional hearing was a big story in 1969," said Lindstrom. "It was front page news in the Los Angeles Times."

The end result of the hearing? Ron was appointed to the Regional Water Quality Control Board, Santa Ana Region, by California Governor Ronald Reagan and soon after become Director of Sea Grant at USC while Lindstrom, only 22 at the time, was hired by the Sanitation District to work in their new marine bio-assay lab to determine if sewage effluent was toxic to marine life (Lindstrom, who worked there for 4 years and has been a consultant ever since, reported good news: no specific link was ever made regarding any cause-and-effect relationship at the outfall). As for the Sanitation District — it was among the founding members of NWRI many years later!

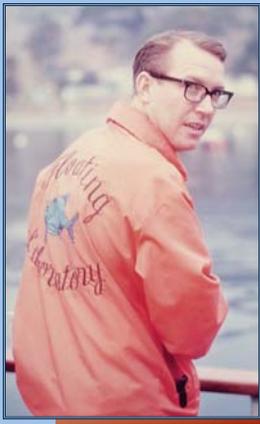
"It was the beginning of Ron's life-long mission to protect water quality," said Lindstrom.

appreciation of the marine environment and show them that science can be an exciting experience.

The lab itself was a 65-foot former sports fishing vessel converted for scientific investigation. It would set out from Newport Beach each morning with a boatload of students who, throughout the day, would haul aboard a trawl net teeming with squirming, slippery specimens to the chant of "heave ho," learn the rudiments of navigation (such as interpreting radar and plotting the boat's position), and test seawater quality conditions.

It truly was a hands-on experience. Students manned the boat and handled sea life, and often came home tired and smelling fishy. But many couldn't resist offering to volunteer working on the boat during the summer!

What started in 1967 as a small pilot program financed by the U.S. Department of



Education soon skyrocketed into a major educational attraction. Twenty school districts took part in the Floating Lab program its first year of operation — and, of these, 11 added marine science classes to their permanent curriculum. In just 3 years, over 32,000 students and

their teachers had gone to sea with the Floating Lab, which by now had been featured on a national television program and numerous newspaper articles. It even expanded to include extended classes — including a weekend study session on nearby Catalina Island and short cruises through the Channel Islands — for college students.

At the time, there was no other program like it in the world.

interesting than the moon's behind." He said that space exploration was receiving more federal funding and had more pages in school textbooks devoted to it than the oceans did — even though water makes up 71 percent of the earth's surface. It was a discrepancy he wanted to see reversed.

That same year, he spent one month in Mexico City as a lecturer and consultant at the invitation of the Mexican Government to help develop marine science programs within the Mexican educational system. As part of that effort, he was the first North American educator to be invited to the *Congreso Nacional de Oceanografica*, where he conducted a 2-day workshop in oceanography for 1,200 selected educators, technicians, and scientists throughout Mexico.

At this point, he was becoming more and more recognized as an expert oceanographer. Though he'd had no formal training in the field, it didn't stop him from holding marine-science workshops at the University of California system or serving as an advisor to the Fullerton Junior College Oceanographic Technology Program. Nor did it prevent him from being appointed Vice President of Educational Affairs for both the American Society for Oceanography and National Oceanographic Association.

He could even be found at student career days throughout the state, giving advice to teenagers on becoming oceanographers.

Perhaps the most telling sign that he'd made it to the top as an oceanographer was when he began working with Jacques Cousteau, the most famous oceanographer in the world. Originally, Ron was hired by Doubleday Multi-Media, Inc. to edit, re-script, develop, and market educational resource

A Labor of Love...

Ron was principal advisor and co-founder of the Marine Studies Institute (MSI) at Dana Point Harbor in California, a one-of-its-kind multi-million dollar education center meant to promote an appreciation of the marine environment and create a new generation of oceanographers.

MSI was intended to be available to students all over Southern California, and was to feature classrooms, labs, an auditorium, and an aquarium, as well as include activities like whale watching. In addition, it was to be a permanent base for the Floating Lab program.

Ron's former student, Kris Lindstrom, attended MSI's groundbreaking ceremony. He said the highlight of the day was meeting the man behind the voice of Tony the Tiger, a celebrity who Ron would often invite to help out with fundraising efforts.

Ron was asked to be Director of MSI back in 1968, but complications soon postponed its establishment (its construction was slated for completion in 1975). Though Ron moved on to directing the Sea Grant programs at USC and the University of Hawaii, his interest in MSI never wavered.

When he returned to California in the late 1970s, one of the first things he did was volunteer his time to help finalize the institute. His efforts paid off when it opened its doors to the public as the Dana Point Ocean Institute. It's been educating youngsters ever since!

The Linsky Motto...

Ron's oldest son, Bryan, spent three summers in a row at sea with him on the Floating Lab.

"It was a special time for me," recalled Bryan. "I'd spend weeks with my dad out there on the boat. I was only a young boy then, but I worked for him, and we got to travel up the Channel Islands on the California coast together."

"One of the things I liked most about my dad," said Bryan, "was that he never criticized anyone taking a chance. He'd say that sometimes in life, you needed to get on the horse and take a ride. It didn't matter what it was as long as you were passionate about it."

And, if it didn't work out, then you simply followed the Linsky motto: when things get rough, pick yourself up, dust yourself off, and start all over again.

The Self-Taught Oceanographer

And, at the time, oceanography — the study of the sea — was a relatively new field. It was also a field that Ron was beginning to make a name for himself.

By day, he was Director of the Floating Lab Program for the Orange County Department of Education, working hard to encourage children to appreciate the ocean. At night, he began lecturing at various local colleges and libraries to spread the word on topics like marine mammals or ocean pollution.

But that wasn't all he did.

In 1969, he appeared at a 2-day State Marine Science Convention in Florida to point out that "the ocean's bottom is more

materials for *The Undersea World of J.Y. Cousteau* film series. According to his wife, Patricia, Ron would sit in his living room for hours and manually splice pieces of Cousteau's films together.

Ron's former student, Kris Lindstrom, remembered that "Ron met with Cousteau a lot. They connected because they both loved the ocean."

Once again, all of Ron's hard work and enthusiasm soon paid off. His beloved alma mater approached him with an offer he couldn't refuse — overseeing the brand-new Sea Grant program at USC.



Look out for Part Two of Ron's biography in the Winter newsletter, which will encompass his years as a Director of Sea Grant at two universities, his 3-year stint living in Trinidad, and his escapades in Sri Lanka and the Philippines ... not to mention the one time he lectured the Thai Royal Family.

Move Over, Jacques Cousteau...

In 1971, Ron received the Premi Tridente d'Ora from Italy for outstanding contributions in the field of Oceanography. Previous winners included Jacques Cousteau and Harold Edgerton. Ron, who was 37 years old at the time, accepted the award at the Ustica Oceanographic Institution in Italy, and stayed one month touring the country as a guest of the Italian Government to consult on marine resources development in the Mediterranean.



Jeffrey J. Mosher Named Acting Executive Director of NWRI

Jeff Mosher has taken on one of the most challenging, yet exciting, responsibilities of his life: leading NWRI as Acting Executive Director. An experienced program manager who has worked 18 years in the water industry, Mosher is now overseeing one of the largest water research institutes in the U.S.

"I am honored to be in a position to work with NWRI and its agency members in addressing water-supply challenges facing the water community," said Mosher. "NWRI is well positioned to expand on the vision of Joan Irvine Smith and the successes of Ron Linsky in meeting the needs of the water industry in California and across the nation. I want to thank NWRI's board members for their support, and I look forward to the opportunities ahead."

In August 2005, Mosher was hired as Associate Director of NWRI with the plan of succeeding NWRI Executive Director Ronald B. Linsky after Linsky retired; however, in light of Linsky's sudden passing, the NWRI Board of Directors has named Mosher as Acting Executive Director of NWRI.

"One of the last things Ron Linsky did as Executive Director was to think of a succession plan," said John Withers, Chair of the NWRI Board of Directors. "We are lucky that he was involved in selecting Jeff Mosher, who is a great choice for NWRI. Jeff will build upon what Ron started, and NWRI will carry on as one of the most flexible and innovative water research organizations in the world."

Originally from Virginia, Mosher studied Chemistry as an undergraduate at The College of William and Mary. While at school, he had the opportunity to work two summers at NASA conducting research on testing different novel polymers for space station applications. He realized that he liked the applied side of chemistry — trying to understand how mechanisms work and then taking that knowledge and applying it to new applications — so he decided to pursue a job in that arena.

His first position was for Milliken & Co., one of the largest textile and chemical manufacturers in the U.S., where he oversaw everything from scheduling operations to improving the processes for mixing fabric dyes. It was during this time that he became interested in the impacts of chemicals upon their environment, especially on water and wastewater treatment plants.

That's when he moved to Washington, D.C., to work in environmental services. By day, he managed federal government contracts revolving around groundwater and drinking water quality for several consulting firms that dealt with national policy and regulatory issues. At night, he attended classes to earn an M.S. in Environmental Engineering from The George Washington University.

He worked a total of 10 years as an environ-

mental consultant, specializing in the areas of water quality, regulation, and policy. Some of the projects he was involved with included human risk assessments, the fate and transport of contaminants in the environment, and economic cost and benefit analyses.

Then, in 1999, Mosher left the consulting world to work for the Association of Metropolitan Water Agencies, which represents large municipally-owned drinking water systems across the nation. As Director of Technical Services, he was responsible for tracking regulatory and legislative issues, as well as for managing association programs and initiatives.

For example, he helped establish and coordinate a national advisory committee on water utility security prior to the September 11, 2001, terrorist attacks on the U.S. "It was exciting to work on a national policy that could result in significant improvements for water agencies across the country," he said. "Even if it's just a matter of keeping vandalism down or preventing people from getting inside the plant, there are many simple things you can do to make a big impact. Not many water utilities had all the needed measures in place."

Working on these initiatives also gained him an appreciation for the use of non-conventional sources of water as a water supply (such as water recycling and desalination) in areas of the country that have inadequate sources of water. As a result, he joined the WateReuse Foundation in 2002 specifically to address these issues.

A nonprofit organization, WateReuse Foundation focuses on increasing public awareness and understanding of recycled water, as well as facilitates the development of technology to improve water recycling and desalination. There, Mosher served as Director of Research Programs for 3 years, where he was responsible for directing a multi-million dollar research program, identifying research partners, and organizing workshops and conferences, among other duties. Concurrently, he was also Director of Technical Services for the WateReuse Association, a non-profit trade organization representing water reuse agencies.

While he was at WateReuse, Mosher had the opportunity to coordinate with Linsky on several joint NWRI-WateReuse sponsored projects. They had also worked together on advisory panels and planning committees for different conferences.

"Ron Linsky was bold, boisterous, and pushed big ideas," said Mosher. "Because of him, NWRI has a great reputation for doing things faster, better, and cheaper than many other organizations. He also made sure NWRI focused on addressing the most important issues, bringing them to the forefront of water science. I will make sure that continues."



Jeffrey J. Mosher

NWRI Sponsors Conference in China on Improving Water Quality

In September 2005, NWRI co-sponsored a conference in China that focused on examining the latest technological and scientific developments for upgrading drinking water quality.

Nearly 200 participants from China, Australia, the U.S., and Europe attended the *International Conference on Novel Technology and Management for*

County by using microfiltration, reverse osmosis, and ultraviolet disinfection to treat wastewater and recharge it into the groundwater basin. There are some areas of China that need technologies like these.”

Eckenrode was pleased that NWRI took part in this international conference. “We need to make certain that NWRI addresses problems that are universal in nature,” he said. “We have to be good stewards of the earth’s resources, and that means we need to work wherever we’re needed to ensure there are no water shortages throughout the globe.”

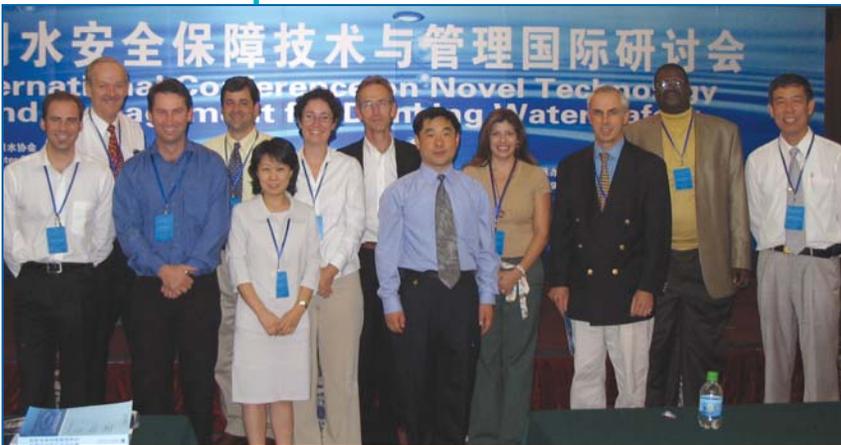
The conference provided a forum for technical experts, researchers, water agency managers, engineers, and students from China and around the world to share experiences on upgrading drinking water quality through enhanced treatment technologies. It featured over 30 technical presentations that focused on processes, such as membranes and advanced oxidation, to upgrade drinking water quality.

NWRI invited the following U.S. representatives to discuss a wide range of research and water treatment applications at the conference:

- ◆ Sharon Walker, Ph.D., of University of California, Riverside, who discussed the influence of bacterial surface polymers on bacterial adhesion and transport in groundwater.
- ◆ Jack Wang, Ph.D., of the Louisville Water Company, who presented on source water protection and riverbank filtration.
- ◆ Victor Moreland, Ph.D., of the University of Hawaii, who discussed water management and water reuse.
- ◆ David Rechow, Ph.D., of the University of Massachusetts, who focused on approaches to disinfection byproduct precursor characterization and control.
- ◆ Christopher Nietch, Ph.D., of the U.S. Environmental Protection Agency, who discussed integrated source water protection.
- ◆ Mamadou Diallo, Ph.D., of California Institute of Technology, who presented on the use of nanomaterials and membrane technologies for water treatment.

“The conference was all about awareness,” said Dr. Walker. “My presentation was meant to get people thinking about how different parameters — and not just physical parameters, but many others including groundwater chemistry, mineralogy, and nutrient availability — impact the fate and transport of pathogens in groundwater. For me, personally, the conference opened my eyes to a wonderful culture with a great history of engineering. It also opened a dialogue between me and several Chinese colleagues, which I hope will lead to future collaborations. It’s amazing what a week can do to change someone’s perspective.”

NWRI is in the process of preparing a set of conference proceedings, which should be available this fall.



Representatives from China, Australia, the U.S., and Europe presented at the International Conference on Novel Technology and Management for Drinking Water Safety in Tianjin, China. Photo courtesy of Sharon Walker, Ph.D.

Drinking Water Safety in Tianjin, China. Because it is considered one of China’s economic centers, Tianjin and cities like it are looking at strategies — like using water reuse or desalination — to ensure economic development is not impeded by a lack of water resources.

The conference, which was a joint China-U.S. effort, was organized by the Tianjin Waterworks Group Co., Ltd., and the Harbin Institute of Technology. NWRI was one of the conference sponsors.

“By sponsoring these types of international conferences, NWRI hopes to facilitate the exchange of information between the U.S. and its international partners, which provides immediate benefits for these countries, and to explore opportunities for collaboration on future research efforts,” said Jeff Mosher, NWRI Acting Executive Director.

Norman Eckenrode, Vice-Chair of NWRI’s Board of Directors and Board Member for the Orange County Sanitation District, represented NWRI at the conference. In his opening remarks, Eckenrode explained how advanced technologies are used in the U.S. to provide additional sources of water. He described treatment technologies that will be used in the Groundwater Replenishment System, a \$487-million water reuse project in California, and the benefits that it will provide surrounding communities.

“In China, a lot of cities have water that is contaminated due to the industrial expansion that’s been occurring the last few years,” said Eckenrode after the conference. “It’s important for them to make plans to improve and maintain the quality of their water resources. That’s what we’re doing in Orange

James Moncur of the University of Hawaii Has Joined the RAB

NWRI is pleased to announce that James E.T. Moncur, Ph.D., an economist and Director of the University of Hawaii Water Resources Research Center in Honolulu, Hawaii, has joined the NWRI Research Advisory Board (RAB). *Mahalo, Jim!*

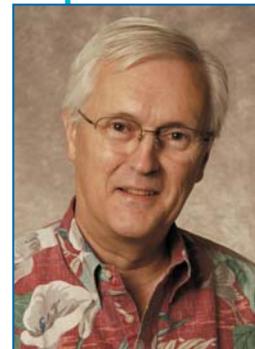
NWRI's research program is reviewed and evaluated semi-annually by its RAB, whose members represent expertise from academia, private sectors, public utilities, and regulatory agencies.

"I was more than pleased to accept Ron Linsky's invitation to join the RAB," said Moncur, "because of a shared interest in the value of water and related topics. As an economist, I'm all too aware that the common underpricing of water leads users to over-consume wastefully, and I hope NWRI can continue

to increase awareness of this waste."

At the University of Hawaii, Moncur regularly teaches environmental economics courses and conducts research in the areas of water pricing and financing, the economic effects of water law and property rights in water, and the economics of desalination, among other topics.

One of his current projects includes overseeing a 5-year biological and sediment program on marine communities near an ocean sewer outfall in Honolulu. He is also a member of NWRI's Independent Advisory Panel to guide and review the Groundwater Replenishment System, which is considered one of the largest water recycling projects in the world and is currently under construction in Orange County, California.



James E.T. Moncur

"Water From Water" Educational Series Now Available on DVD

NWRI's "Water From Water" program is now on DVD! An educational video series, "Water From Water" was developed by NWRI to enable the general public, decision makers, and professionals to gain a broader understanding of current and projected issues in water science and technology.

The series includes:

~ Volume 1 ~

Program 1: Desalination & Recycling: New Century, New Sources

The only way to find more water is to make "water from water" — to purify the water we already have. For most people, desalination means desalting wastewater. There is, however, another use for desalination that is much more practical and has just as much potential. By using desalination to remove salts, minerals, and other contaminants, inland water supplies can be better used. This video was revised in 2003 to include the Tampa Bay Water Desalination Program, as well as the latest technological information.

Program 2: Recycling

Nature is the ultimate recycler of water. Because of the hydrologic cycle, the overall amount of water on the planet never changes. It is only the distribution of water that varies. Recycling water may be a new idea to the general public, but it has been used for years in agriculture, industry, and cities of every size for business and residential use. What remains a challenge is the most difficult to overcome — not technology nor experience, but the public's perception of using water that has already been used.

Programs 3 & 4: Clean Water: What's It Worth?

It has been over 30 years since Congress passed the Federal Water Pollution Control Act Amendments of 1972 (the "Clean Water Act"), which established a national agenda with a clear goal: to make our lakes, rivers, and coastal waters "fishable and swimmable" once again. After 30 years and billions of dollars in clean water programs, we must ask ourselves what the real value has been to the environment — and the economy.

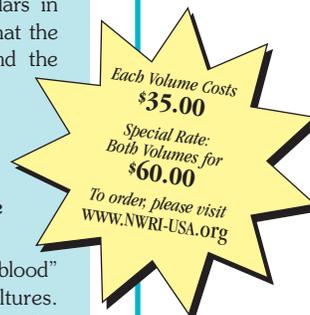
~ Volume 2 ~

Program 5: Veins of Mother Earth: A Native American Perspective on Water

To many Native American tribes, water is the "lifeblood" that protects and sustains their various cultures. Throughout history, water has influenced the trade, migration, and mythology behind tribal societies. This documentary explores both the spiritual and historical importance of water to various tribes across the United States.

Program 6: The Value of Water

This video brings together economists, water experts, and Native Americans to explore one of the most basic, yet controversial, questions in the water industry: what is the value of water? It's a simple question that's very hard to answer because, too often, water is viewed as a limitless and free resource that no one should have to pay for. By contrast, this video highlights the value of water to the Hopi Indian tribe in Arizona, where water is a limited resource in the desert, as well as looks at the value of water to the Tres Rios Wetlands Project in Arizona, which uses natural biological processes to treat wastewater diverted into a manmade wetland.



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Don't Miss Microfiltration IV in March!

March 20 to 23, 2006

DOUBLETREE HOTEL ANAHEIM/ORANGE COUNTY
ORANGE, CALIFORNIA USA

Sponsored by:
National Water Research Institute
in cooperation with:
MWH and Cranfield University

The Microfiltration IV Conference will bring together leading national and international experts in the industry to present and discuss the latest information on microfiltration, an innovative technology that has revolutionized the water treatment process.

In response to the broad acceptance of microfiltration technology around the world, Microfiltration IV will provide an update on the status of the technology and focus on critical issues faced by end-users. Topics will include:

- ◆ Status and recent advances.
- ◆ Results of the updated microfiltration/ultrafiltration database.
- ◆ Innovations and new applications.
- ◆ Regulatory perspectives.
- ◆ Membrane design, procurement issues, and costs.
- ◆ Operational experiences.
- ◆ Fouling control.

The conference will also feature a special one-day short course on membrane bioreactors (MBRs), a promising technology that uses microfiltration to enhance the wastewater and reclaimed water treatment processes.

MBR technology offers several advantages to conventional wastewater treatment, including reduced footprints, consistent and superior effluent water quality, and ease of operation. Advancements in the technology have made MBRs cost-competitive, and installations have increased dramatically in the past decade.

The short course will provide information on the state-of-the art in MBRs and focus on critical issues faced by end-users. Topics will include:

- ◆ Status of the technology.
- ◆ MBR design, procurement issues, and costs.
- ◆ Updated MBR database.
- ◆ Operational experiences.
- ◆ Innovations and new applications.
- ◆ Fouling control.

Tours to microfiltration and membrane bioreactor facilities in the Southern California region will also be available at the conference.

For more details or to register, please visit the NWRI website at www.NWRI-USA.org.

Conference Schedule

Microfiltration Program

Monday, March 20	1:00 pm to 6:00 pm
Tuesday, March 21	8:00 am to 5:00 pm

MBR Short Course

Wednesday, March 22	8:00 am to 5:00 pm
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Field Trips

Thursday, March 23	8:00 am to noon
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Fields trips to a microfiltration facility at the Orange County Water District and an MBR facility at the Corona Department of Water and Power will be available.

Registration

Full Registration	\$425.00
Microfiltration Only Registration	\$325.00
MBR Only Registration	\$195.00
Choice of Field Trip	\$ 25.00

All registration fees include lunches, dinner, and materials.

The Microfiltration IV Conference will be held at the DOUBLETREE HOTEL ANAHEIM/ORANGE COUNTY, 100 The City Drive, Orange, California 92868 USA. To contact the hotel, please call (714) 634-4500 or 1-800-222-TREE. Discount room rates are limited. Please call NWRI for more details.



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Call for Nominations

The 2006 Clarke Prize

The Athalie Richardson Irvine Clarke Prize is presented annually for demonstrated excellence in water science and technology. Nomination packets are now available by contacting NWRI or by visiting the NWRI website at www.NWRI-USA.org.

Deadline for Application: April 1, 2006

