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In Memoriam
Joseph William Johnson

July 19, 1908 – April 11, 2002

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Introduction

by Linda Vida

Professor Emeritus Joseph (Joe) William Johnson had a distinguished and long career. He passed away peacefully on April 11, 2002, at the age of 93. In addition to his career as a professor of hydraulic engineering at the University of California, Berkeley, from 1942 to 1975, Joe Johnson was one of the founders of the Water Resources Center Archives (WRCA).

In the mid-1950's, Joe Johnson and Morrough P. O'Brien recognized the need for an archive devoted to collecting information about water resources in California and the West. In 1957, the California State Senate passed a bill authorizing the creation of the Water Resources Center and the Archives was created soon after. The Archives was established as a sub-unit of the Center to collect and disseminate water-related research to serve the needs of the University of California and the people of the state.

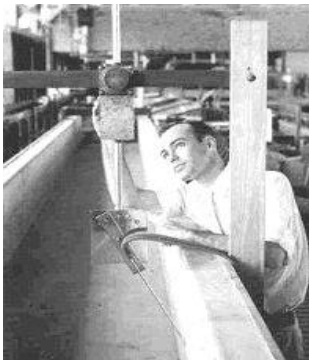
Throughout the early years, Joe Johnson was intimately involved in helping the Archives become established. At that time, he knew all the major players in California water and was instrumental in procuring many high-profile collections for the Archives: Bernard Etcheverry, Charles Gilman Hyde, James Dix Schuyler and Walter Leroy Huber. Under his guidance, the Archives developed its unique classification scheme and began to compile materials pertaining to water pollution, flood control, watershed management, water supply of the great basin, water wells, estuaries, coasts, and bulletins and reports of state water agencies.

Today, the Archives is the only library and archive of its kind in the United States devoted to the collection of water materials, and we are forever indebted to Joe Johnson.

Continued on page 2

IN MEMORIAM

by Professor Emeritus Robert L. Wiegel



Joe Johnson as a young professor in the College of Engineering.

Joseph William Johnson was born on July 19, 1908, in Pittsburg, Kansas. He died on April 11, 2002, in Victoria, British Columbia, Canada. He was 93. He was professor emeritus of hydraulics in the Civil and Environmental Engineering Department of the University of California at Berkeley. He was a pioneer in the field of coastal engineering.

Joe, as he was always known, grew up in Winslow, Arizona, and Los Angeles, California. He received his bachelors and masters degrees in civil engineering from the University of California at Berkeley in 1931 and 1934, respectively. After graduating, he spent a year at the U.S. Army Corps of Engineers Waterways Experiment Station in Vicksburg, Mississippi. He then transferred to the Soil Conservation Service in Washington, D.C., where he worked on sediment transportation from 1935 until 1942.

While in Washington D.C., Joe met and married Virginia Goodwin Burke, of Helena, Arkansas. They had two children, both born in Berkeley: Christina Betts (Tina) and Cornelia Burke (Nelia).

In July 1942, Joe was appointed assistant professor in the Division of Mechanical Engineering at the University of California, and he and Virginia moved to Berkeley. He immediately became involved in the intensive study of waves and beaches that was being undertaken as part of the major war effort in amphibious operations during World War II, for the U.S. Navy. It was a joint effort conducted for the Bureau of Ships by the Department of Engineering at Berkeley under the direction of Morrough P. O'Brien and at the Scripps Institution of Oceanography under the direction of H.U. Sverdrup. Some of his colleagues in this war work were W.N. Bascom, R.G. Folsom, J.D. Isaacs, and J.A. Putnam. A broad description of the project was published in the article "Wartime Research on Waves and Surf," by M.P. O'Brien and J.W. Johnson, *The Military Engineer,* Vol. 39, No. 260, June 1947. He continued his research, teaching, and consulting, becoming a pioneer in the newly developing field of coastal engineering and attracting graduate students and visiting scholars from around the world. These included C.L. Bretschneider, P. Bruun, R.C. Crooke, K. Horikawa, R.C. McCamy, J.R. Morison, E. Prins, T. Saville, Jr., F.E. Snodgrass, and R.L. Wiegel.

Perhaps Joe Johnson was best known—outside of his teaching, research, consulting and government service—for organizing what became known as the International Conferences on Coastal Engineering (ICCE). The first conference was a specialty conference by the University of California's Engineering Extension Division, held in Long Beach, CA, in 1950. Then, first as Secretary of the Council on Wave Research of The Engineering Foundation (1950-1964) and later as Secretary of the ASCE Coastal Engineering Research Council (1964-1978), Joe organized sixteen conferences and was editor of the proceedings, published by the ASCE. In 1974, he became editor of the journal *Shore & Beach* and served in this capacity until his "retirement at the age of eighty" in July of 1988.

Joe Johnson served as a consulting engineer on projects as varied as beach erosion in Venezuela; an ore port in Brazil, a harbor in Puerto Rico; port developments in Mexico, Australia, Egypt, and Peru; harbor sedimentation in Argentina; a port site study in Guatemala; sand dunes in Portugal; a breakwater in Guam; several projects in Canada; and beach and harbor studies in many parts of the coastal United States. Joe always had the ability of seeing through a complicated problem, isolating the fundamental parts of it, and making a decision.

Joe's public service life was a full one. He was chairman of the U.S. Delegation to the U.S.-Japan Cooperative Seminar on Coastal Engineering held in Japan in 1964. He served as a member of the Shoreline Erosion Advisory Panel, U.S. Army Corps of Engineers, 1974-1980. He was vice president and director of the American Shore and Beach Preservation Association, 1974-1988. He served on many committees of the American Society of Civil Engineers, including the Executive Committee of the Waterways and Harbors Division (1957-1962, chairman, 1960). He was chairman of the Pacific Southwest Regional Committee of the American Geophysical Union, 1951-1954, and chairman of the AGU Regional Meeting in 1955.

Joe received many honors for his leadership in coastal engineering. He was a member of the National Academy of Engineering, an honorary member of the American Society of Civil Engineers, an honorary member of the Japan Society of Civil Engineers, winner of the prestigious Berkeley Citation of the University of California, recipient of an Outstanding Civilian Service Medal from the Department of the Army, and recipient of the ASCE's International Coastal Engineering Award and the Moffatt & Nichol Harbor and Coastal Engineering Award. He was the first to receive the Morrough P. O'Brien Award of the American Shore and Beach Preservation Association. The California Shore and Beach Preservation Association's major award is named in his honor.

Joe's major hobby was the history of hydraulics, especially hydraulic engineering in the "Gold Country" in California. He published several papers on his historical studies. Joe found the "hurdy-gurdy" wheel used at the Monarch Mine, Sierra City, Sierra County, California, and it is mounted over the entrance to the present hydraulic engineering laboratory of the University of California at Berkeley.

In August 1985, Joe's beloved wife Virginia died. Their two daughters and grandchildren lived in Victoria, B.C., Canada, and Joe moved to Victoria to be near them.

A memorial service for Joe was held in Victoria on April 21, 2002, with family and many friends attending. At the same time, a memorial luncheon was held in Berkeley, with his old friends reminiscing about him. Joe was cremated as he requested. His ashes will be distributed on the open Pacific Ocean in the waves and water he loved and studied.

Joe Johnson is survived by his two daughters, Christina and Cornelia, both living in Victoria, B.C., Canada, his brother Robert L. Johnson, of Laguna Niguel, California, and six grandchildren.

SEE PAGE 8 FOR A LIST OF DONORS TO THE JOE W. JOHNSON MEMORIAL FUNDS

JOE W. JOHNSON MEMORIAL FUNDS

In memory of Professor Emeritus Joe W. Johnson, two memorial funds have been established at UC Berkeley to support activities that were particularly important to Joe. His family wanted to establish the funds as an appropriate remembrance of Professor Johnson's contributions to the Berkeley campus.

Contributions can be made to the Professor Joe Johnson Memorial Scholarship Fund, College of Engineering or the Professor Joe Johnson Memorial Fund, Water Resources Center Archives.

The addresses are:

Professor Joe W. Johnson Memorial Scholarship Fund
College Relations Office (c/o Dan Estropia)
College of Engineering
201 McLaughlin Hall, MC 1722
University of California
Berkeley, CA 94720-1722
Tel. 510-843-8464; Fax 510-643-7054

Professor Joe W. Johnson Memorial Fund
Water Resources Center Archives
c/o Linda Vida, Librarian
410 O'Brien Hall, MC 1718
University of California
Berkeley, CA 94720-1718
Tel. 510-642-2666; Fax 510-642-9143

Checks should be made payable to the UC Regents. Please indicate on the check that the contribution is for the Professor Joe Johnson Memorial Scholarship Fund or the Water Resources Center Archives Fund. We can also accept Visa or Mastercard contributions. Please send a fax including your name, address, Visa or Mastercard number, and expiration date.

CALIFORNIA COLLOQUIUM ON WATER: FALL 2001

by Katie Hornstein

The fall 2001 California Colloquium on Water again brought together a diverse array of speakers who lectured about complex water issues and the role that water plays in the state of California.

Vincent Resh, professor of Entomology and Parasitology, at UC Berkeley has been teaching at UC Berkeley for over 30 years. In his lecture entitled "Ecology of Mediterranean Climate Streams," he spoke about the potential benefits of the Mediterranean climate in California and related it to the merits of the study of Mediterranean streams. Resh cited Aristotle's ideas of climatic zones for the world, where it is only acceptable to live in the world's temperate zone, rendering other zones unsuitable for life. The mild rainy winters and hot dry summers of the Mediterranean provide a desirable climate in which to live. Other parts of the world with a similar climate are coastal Chile, Spain, and Australia.

Resh argued that this climate has both the greatest environmental stresses and the greatest human stresses placed upon it. This is due to the fact that water is more available at some times of the year than others and human demand weighs heavily upon the fluctuating water availability. When heavy flooding occurs, it places extreme physical stress upon the ecosystem. The formation of pools creates extreme biotic stress: top down controls, predation, and competition. Once the stream is dry, there are abiotic stresses; both require extreme adaptation for fauna. While floods have been extremely well studied, droughts have not garnered the same amount of attention. Resh posited that drought increases salinity, heightens the deposition of fine sediments, hastens the encroachment of vegetation into the stream channel, and results in fluctuating oxygen levels. He argued that it is not possible for Mediterranean climates to have both a readily available water supply as well as healthy streams, and he proposed an increased need for consistently efficient wastewater operations to alleviate availability problems. It was abundantly clear from the lecture that Mediterranean ecosystems are physically, chemically, and biologically shaped by sequential, seasonal events of flooding and drying.

Joseph Sax, a distinguished UC Berkeley law professor, lectured on the public trust and water rights. In his lecture entitled "Public Trust: Philosophical and Legal Implications for California's Future," he argued that the public trust is both "a philosophy and a tool." That is to say, that the public trust stipulates that a relationship ought to exist between people and resources. He believes that the public trust is a functioning, powerful, operative legal tool that creates specific duties that are enforceable by law.

In essence, the public trust can be reduced to three concepts. The first contends that water has always been a community resource, and that it has never been and never can be privately owned or privatized as some other resources. It is important to remember that water moves and is used and reused. Secondly, because it is a resource with special claims made upon it by the public, its status evolves over time to accommodate public needs; it is judicially articulated over time. Thirdly, the public trust is not just a source of authority for the state, but a duty. It constitutes a mandatory use of resources for the public benefit. In the Marx vs. Whitney case the court ruled that environmental protection is essential to the public trust doctrine.

Sax believes that protecting the public trust is a continuing obligation of the state and that water rights cannot be permanently acquired, and must be reexamined by the state periodically to be in agreement with the fundamental goals of the society at that time. Sax envisions that in the future, land use plans will begin to take the public trust into account. Timber harvest plans also need to take into account public trust claims upon the land to preserve the health of the land. These shifts can be made in a way that is not disruptive. Sax concluded, "the functional part of the public trust will represent the full range of the trust as a philosophical premise of people, resources, and property."

The third lecture, "The CalFed Bay-Delta Program and the Future of California Water Policy" was delivered by Patrick Wright. The program is a consortium of local and state agencies whose common goal is to improve the health of the Bay-Delta. The Delta is one of the richest resource

areas in the United States, important for both the state as well as for the rest of the nation. It is a veritable wealth of resources, supporting a diverse wildlife population as well as the water supply for huge portions of California. Partly because it does not evoke the same grandeur as other resource areas, the Delta lacks a certain degree of public awareness and that is one of the main challenges of the program.

Wright signaled that the Delta no longer functions as a viable environmental system or as a water delivery system. It is a system in decline: a great number of species are listed as either threatened or endangered, water quality has been degraded, and farmers can no longer depend on having an adequate water supply. At the end of 1994, multiple state and local water agencies brokered what amounts to a "cease fire" in California's water wars when they created the CalFed Bay-Delta Program. As Wright noted, before the creation of the program, "each agency was powerful enough to block each other but none was powerful enough to get its program pushed through." By signing the Bay-Delta Accord, the agricultural community agreed to give up water in return for promise of a long term fix to the state's water supply. The agreement was signed in August of 2000, and we are now in the second year of implementation.

Thus far, over 300 projects have been funded by the program, most of which will be or already have been independently reviewed. The most important goals of the programs include water supply reliability, conveyance and operational improvements. Storage projects are also extremely important to the success of the program. Wright spoke about the potential project to increase water storage in the Shasta Reservoir. As Wright aptly stated, "no one tool is seen as the ticket. It will take progress on a number of fronts to increase the state's water supply reliability."

The last lecture of the four part series was given by Professor Takashi Asano, an expert in water reclamation at UC Davis and recipient of the 2001 Stockholm Water Prize. He lecture was entitled "The Role of Water Reclamation and Reuse in Water Resources Management," and he spoke about the role of water reuse as an innovation in water resources. Asano began his lecture by focusing on the notion of global resources and the demand for water. In California, over 80 percent of water is used for agricultural purposes. Asano discussed the problem of potential water supply shortages due to drought or population growth. There is no obvious solution. The state will find that as resources are stretched, the role of reclamation will become increasingly important.

Asano proposed that wastewater be thought of not merely as something to dispose of but as "a resource for water recycling." Historically, water reuse is nothing new. In 1890, drainage canals were dug in Mexico to irrigate crops, but since the water was urban runoff and was not treated, there were grave public health consequences. In 1912, water was reused to water lawns and parks in San Francisco. Other possible uses of wastewater include groundwater recharge, groundwater replenishment, salt water intrusion, and controlling land subsidence due to over pumping groundwater. Water reclamation projects often result in the creation of recreational areas, which are a great benefit to the communities they serve. Non-potable uses of reclaimed water include fire protection, air conditioning, and toilet flushing and reclaimed water pipes are now standard in most green buildings. And while potable reuse is certainly a controversial discussion, Asano showed a slide of a friend of his drinking reclaimed water in order to illustrate the point that it is safe to drink it.

California Colloquium on Water: Spring 2002

by Katie Hornstein

For the third year in a row, the Water Resources Center Archives co-sponsored the California Colloquium on Water lecture series. As with previous semesters, the spring 2002 lectures focused on a wide array of water resources topics and brought together an eclectic mix of scholars and professionals.

The first lecture in the series, entitled "Alien Invaders, Endangered Natives and Declining Fisheries: A History of Fish in the Upper San Francisco Estuary," was given by Peter Moyle, a professor of fish biology at UC Davis. Moyle's lecture outlined the current threats posed by invasive species in aquatic environments. Throughout Bay Area aquatic environments, there are differing combinations of native and invasive species. The Sacramento-San Joaquin Delta is mostly native, whereas the bay is predominantly introduced species. Native fish populations have been in steady decline since the 19th century, but documentation of the trend did not really commence until the 1970's. It is now evident that this decline is due to a multitude of factors that include climate fluctuation, pollution, habitat loss, and fisheries. Invasive species also pose a major threat to California aquatic environments, most notably in the Bay. Moyle called for a better understanding of the estuarine environment and cautioned that there are no easy solutions to this incredibly complex problem.

Departing from biology, the second lecture was delivered by Bill Simmons, an anthropology professor at Brown University. Simmons' lecture, "Water and the Creations of Indian California," focused upon the culture of indigenous California peoples and the important role that water played in their culture. It is estimated that approximately 310,000 indigenous peoples populated California, comprising 500 different communities. For most of the indigenous tribes of California, water occupied a near sacred status as it was one of the most powerful forces in their lives. It was a force to be revered and feared, capable of both nourishing the body and destroying the land. This is largely evident in the corpus of mythology from indigenous California peoples. Simmons chose to focus mostly on creation myths and flood myths to illustrate the importance of water. Passed down in a rich oral tradition, these myths relate water to the creation of the landscape, the creation of man, as well as the notion of death. One of the most prevalent themes in these myths is the struggle between land, water, and creatures. According to Simmons, the native California communities "knew the California landscape better than anyone will ever know it." Unfortunately, there is no way to recuperate the unique body of knowledge that was lost. However, scholars such as Professor Simmons provide insight into the vast culture of these populations.

Emeritus professor of civil engineer at UC Berkeley and currently a consulting engineer, David K. Todd gave the third lecture, "Managing Groundwater Resources." He commenced his lecture by positing groundwater as a virtual resource: "It's difficult to harness and to grasp because you cannot see it. Management is fairly difficult because it's hard to get to and it's constantly moving." The way to control it is through knowledge and management of water level fluctuations.

Todd focused upon the Indus River in Pakistan, an interesting geographic case study of groundwater management. An agriculturally rich river valley, there are five rivers which converge to form one river. Known as the "land of the Punjab" (Land of Five Rivers), modern irrigation was developed in the 19th century by the British settlers. The valley is over 25 million acres of flat, permeable land, which slopes down to the Sea of Karachi. During the last two centuries, the flow of the rivers was diverted to irrigate the valley, causing the water table to rise almost up to the ground surface. This caused saturation of the soils and caused a salt crust to form on the ground. The solution was to lower the water table, and a grid of wells was installed so that the root zone could be flushed out. This effort was successful and normal agricultural practices were restored.

Todd also discussed the concepts of conjunctive use, transfers, and artificial recharge. He discussed the increasing reliance upon groundwater. The use of groundwater has expanded dramatically because of a decrease of surface water resources. He lauded proactive water resources development efforts to use underground space to store

groundwater. Quoting John Muir, Todd discussed the interconnectedness of all aspects of nature: "When one tugs at a single thing in nature, he finds it attached to the rest of the world." He related this to groundwater management: "Any time you drill a well, you are creating a dimple in the water level that reverberates. It's like throwing a pebble into a pond; you get a lot of circles that keep radiating outward." The future of groundwater management depends upon an understanding that all things in the world are interrelated and should be treated accordingly.

Jack Cassidy, a consulting water resources engineer, delivered the fourth and final lecture, "The Role of Dams in Water Resources." Dams have been both vilified and celebrated in modern water resources management and Cassidy is a highly regarded expert on the role that they play. Having worked as a hydraulic engineer, Cassidy's knowledge is based upon decades of first hand experience.

The first known dams were constructed about 8,000 years ago in Mesopotamia, and they were also built for irrigation in Jordan and Egypt in 1100 BC. The use of dams increased dramatically during the course of the 20th-century. In 1949 there were approximately 5000 known dams. Today there are over 45,000 dams in the world. According to Cassidy, the benefits that dams provide are well worth the effort spent on their construction. They include irrigation, energy, recreation, and flood control. Cassidy argued that "modern opposition to dams is due to environmental and social concerns." Negative aspects of dams include inundated lands, displaced people, changes in the river regime, safety concerns, as well as not achieving predicted benefits.

To address concerns about dams, a World Commission on Dams was convened in 1998. An international panel, funded by 53 corporations, agencies, and foreign governments, was charged with independently reviewing dams. The World Commission on Dams concluded that "dams have made an important contribution to human development, and the benefits derived from them have been considerable." Another conclusion reached by the commission was that in too many cases an unacceptable and often unnecessary price has been paid to secure potential benefits. After reading the various conclusions, Mr. Cassidy argued that the commission was unable to escape a bias against dams and that greater precedence was accorded to the negative impacts rather than highlighting the achievements of dams. Mr. Cassidy did however laud the suggestions offered by the commission and commented that the effectiveness of the World Commission on Dams has yet to be determined.

CALIFORNIA COLLOQUIUM ON WATER

The Colloquium is jointly sponsored by the Water Resources Center Archives and the Center for California Studies of the University of California. It is financially supported by the Deans of the Colleges of Engineering, Environmental Design, Letters & Science, Natural Resources, Boalt Hall School of Law, as well as the Provost and Vice Chancellor of the Berkeley campus. Additional support is provided by the Metropolitan Water District of Southern California.

November 12
DAMS AND DISASTERS: A BRIEF OVERVIEW OF DAM BUILDING IN CALIFORNIA
J. David Rogers

Karl F. Hasselmann Missouri Chair in Geological Engineering at the University of Missouri-Rolla

December 10
ENVIRONMENTAL ADVOCACY: A PRACTIONER'S HISTORICAL PERSPECTIVE
Tom Graff

California Regional Director, Environmental Defense

Refreshments will be served at the Water Resources Center Archives, 410 O'Brien Hall, 4:45 p.m. to 5:30 p.m.
Lectures will be held at 3 Le Conte Hall 5:30 to 7:00 p.m.

DONATIONS

Joe W Johnson Memorial Fund

Thank you to the following individuals for their recent donations to the Joe W. Johnson Memorial Fund:

$500+

Christina and Nelia Johnson
Professor Emeritus Robert L. Wiegel

$250+

Nancy and Robert Earl
Mr. & Mrs. Thorndike Saville

$100+

Ben Gerwick
Gerry Giefer
Susan and James Greer
Modhav Manohar
David K. Todd
Kazuo Tokikawa

$100 OR LESS

Barbara Easterbrook
Carol Olson

Friends of the Archives

The following individuals and corporations have recently become Friends of the Archives.

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ROMA Design Group
Metropolitan Water District of Southern California

PATRONS / $500 +

Todd Engineers
Professor Robert L. Wiegel

ASSOCIATES / $250 +

Bechtel Corporation
East Bay Municipal Utility District
County of Alameda Water District

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California Urban Water Agencies
Iris Priestaf and Doug Greeberg
Norfleet Consultants
Ripley Pacific Company
Strategic Environmental Analysis
Zone 7 Water Agency

To become a member of the Friends of the Archives, refer to the last page of the newsletter or reach Linda Vida at (510) 642-2666 or lvida@library.berkeley.edu.

Our Sincerest Thanks to All of Our Supporters!

BOOK REVIEWS

INLAND FISHES OF CALIFORNIA
by Peter Moyle

When the first edition of ***Inland Fishes of California*** was published in 1976, it was a benchmark reference. Since that time, our knowledge of California's freshwater fishes has dramatically increased. This completely revised edition incorporates a vast amount of new information and creates a fresh synthesis of the historical data. Written by the leading expert on California's freshwater fishes and illustrated with beautiful line drawings, this compendium is the single best source for understanding and identifying the state's freshwater fishes. It is an essential resource for anyone who needs to have accurate and detailed information on California's fishes at their fingertips.

Since the 1870s, the state's native fishes have been joined by thirty-four alien species, which now dominate many bodies of water. This book treats both native and introduced species, first in a key for identification and then in individual species accounts covering characteristics, taxonomy, names, distribution, and life history. Each account includes the author's personal assessment of how well the species is doing and problems associated with its management. Most of the native fishes are found only in California and show wonderful adaptations for living in the state's diverse waters. Unfortunately, many are in danger of extinction.

The message underlying the first edition of this book was that we knew astonishingly little about many of California's inland fishes. Although our knowledge is increasing, full accounts of some native fishes may not be complete before they become extinct. Preventing the loss of native fishes is the major goal of this book, and Moyle makes important suggestions for conservation strategies as well as presenting up-to-date information on ecology, life history, and distribution. With this knowledge, preserving our native fishes becomes possible even in the face of the state's growing economy and population.

HANDBOOK OF WATER USE AND CONSERVATION
by Amy Vickers

The long-awaited ***Handbook of Water Use and Conservation*** by water efficiency expert Amy Vickers is finally in print. This authoritative work presents 464 pages of solutions on how to trim wasteful water usage. Vickers asserts that "system-wide reductions of at least 25% from conservation may be a reasonable goal for many North American water utilities." No one is spared from Vickers' water-conserving plan: she finds serious water savings for the smallest lawn to the largest farm, from urban zoos to industrial cooling towers. The handbook describes technologies and practices to conserve water in homes, businesses, industries and farms. Information presented is clear, well-organized and thorough. The book offers 10 key steps to a successful water conservation program, describes how to conduct water audits, gives data on the water and energy savings and costs of the measures described, provides case studies of good examples to follow and much more. With this book, any excuses for wasteful water usage go down the drain.

ARCHIVAL NEWS

FAREWELL ELIZABETH REDIES

Last July, Elizabeth Redies announced her retirement after working for the Water Resources Center for over 18 years as a technical services library assistant. She started her career working at the Water Resources Center Archives satellite library located on the University of California, Los Angeles campus. At the time the UCLA Archives had a staff of two, Beth Willard, the librarian and Elizabeth Redies, library assistant. Beth and Elizabeth worked together to keep the unit functioning.

During the late 1980s, the UCLA Archives was closed due to budgetary constraints. Beth retired and Elizabeth accepted a transfer to the Berkeley Archives. This transfer permanently increased the staffing at the UCB Archives from three to four fulltime employees. After the transfer, Elizabeth was trained on cataloging and throughout her career at the UCB Archives devoted most of her time to copy and original cataloging. In her tenure at the Archives, Elizabeth worked on many long-term cataloging conversion projects and eventually worked on cataloging portions of some manuscript collections.

The Archives is indebted to Elizabeth for her 12 years of service to the UCB Archives and her six years of service to the UCLA Archives. We never would have completed all of the massive conversion projects that were necessary once the library became a member of OCLC without Elizabeth. She was extremely reliable and would help fill in whenever needed. When the Archives started its own interlibrary loan services over five years ago, Elizabeth offered to manage this service.

Elizabeth will be missed, but we wish her a great retirement.

FAREWELL TO JESSICA

After three years of devoted service to the Water Resources Center Archives, Jessica Jaramillo has decided that it is time to move on. As a student employee, Jessica played an integral role in the daily functioning of the library and was a master of shelving. Her thorough knowledge of the collection was a great benefit to patrons and employees alike. And who can forget her remarkable attention to detail? When preparing mailings, Jessica's folds were always the most careful and exact. After graduating in December 2001 with a major in art history, Jessica began working full-time in the library, taking on the monumental task of managing the interlibrary loan service. She succeeded with great ease and took on additional responsibilities. Jessica has decided that she wants to join the ranks of library professionals and has set her sights on obtaining her master's in Library Science. She currently resides with her family in Los Angeles where she will finally learn how to drive and how to cook her favorite dessert, Capryotada or Mexican Bread Pudding.

WELCOME PAUL ATWOOD

The Water Resources Center Archives welcomes Paul Atwood as the new head of technical services. Paul received his Masters in Library and Information Studies (MLIS) from San Jose State University in May 2002. Prior to receiving his MLIS, Paul worked as the Circulation Supervisor at the UCB Harmer E. Davis Transportation Library for over three years. Before relocating to Berkeley over three years ago, he received his undergraduate degree in philosophy from Long Beach State University.

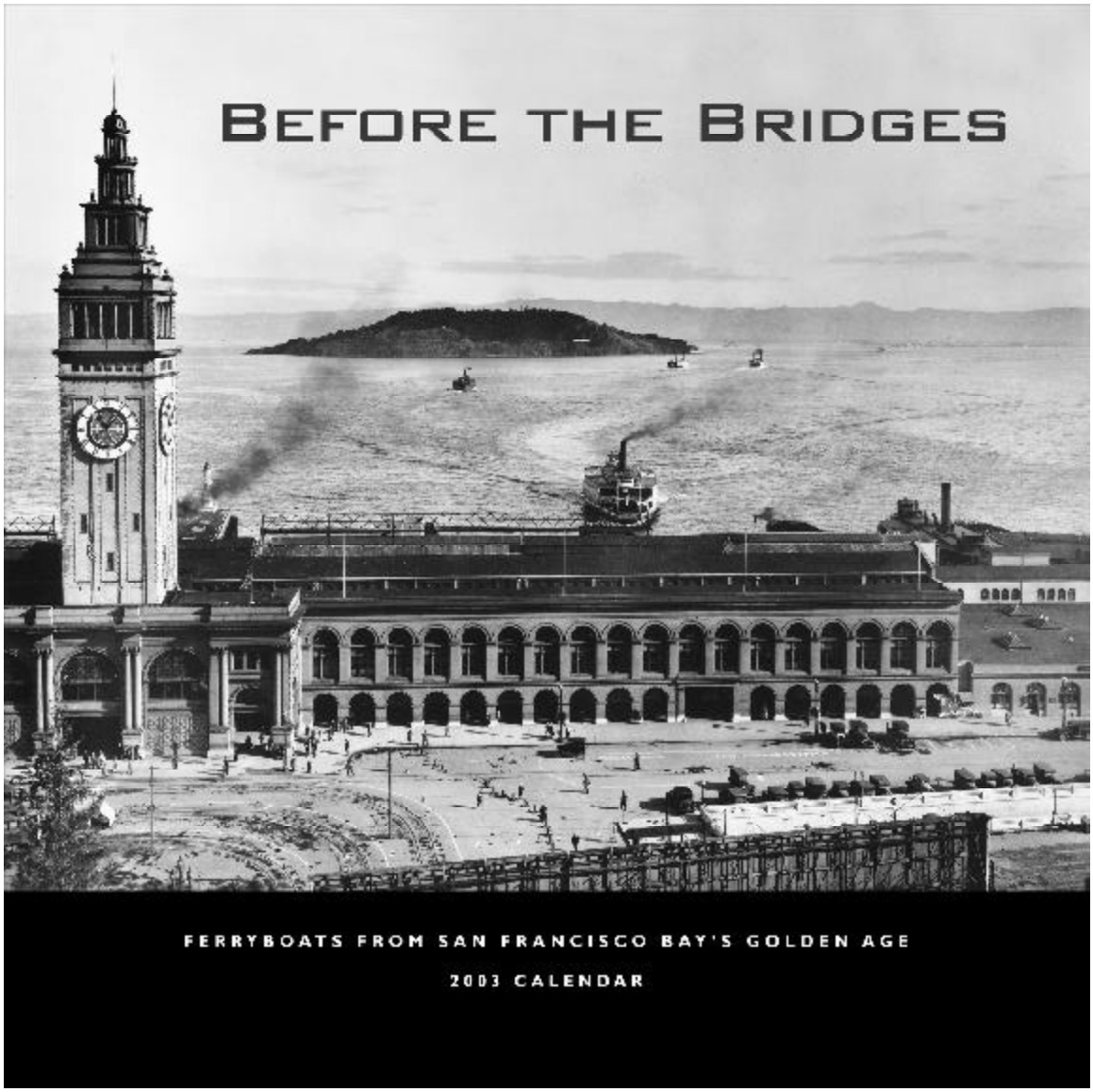
While in Library School, Paul's emphasis was on archival management and information technology. His new duties as Assistant Librarian at the Archives include cataloging, web management, archival processing, creating and updating our Online Finding Aids, collection preservation, reference and more. Paul started working at the Archives in mid-July and immediately helped to update the web site and learn a new subject area – the world of water. He is currently cataloging, helping to hire a Technical Services Library Assistant, and learning the collection by helping with reference services.

In addition to his work related duties, Paul has many hobbies. He enjoys independent and foreign films, especially French New Wave, playing Ultimate, riding his bike, and traveling. After graduating from San Jose State, he traveled in Germany and England for three weeks. Please help me in welcoming Paul Atwood to the staff of the Archives. We are fortunate to have someone with his expertise and talents.

A SALUTE TO HUNG

The Water Resources Center Archives (WRCA) bids a fond farewell to Hung Thai one of its most distinguished and dedicated student employees. Over the course of three and a half years, Hung proved himself to be an indispensable resource at the library. During the years that Hung worked here, he became experienced in every student job that we have and even managed our entire interlibrary loan service for one summer. He was involved with many stack shifts, helped prepare material for NRLF, re-housed manuscript collections and learned some html markup to keep our web site updated. He designed Colloquium flyers and helped format *WRCA News* using Pagemaker and his skills using Excel and Word are legendary. In short, Hung excelled at every job that we gave him and could always be relied upon to complete every project.

He graduated last May with a major in integrative biology and has set his sights upon optometry school. After a four week trip to China, Japan and Taiwan this summer, he will head to Boston. He hopes to one day move back to the Bay Area to practice. Hung brought to the Archives an unprecedented brightness and cheer which will be sorely missed. The WRCA wishes Hung the best of luck with his future plans.



BEFORE THE BRIDGES: FERRYBOATS FROM SAN FRANCISCO BAY'S GOLDEN AGE

Two University of California, Berkeley, specialized libraries--the Water Resources Center Archives and the Harmer E. Davis Transportation Library--are pleased to announce the publication of their annual wall calendar.

The 2003 calendar, "Before the Bridges: Ferryboats from San Francisco Bay's Golden Age," features 12 unique black and white photographs of San Francisco Bay ferries. Using photographs from the collections of San Francisco's National Maritime Historical Park, the calendar covers a roughly 75 year span of Bay Area history, from the late 19th century through the 1950's.

Sponsored by the Bay Area offices of Moffatt & Nichol and the ROMA Design Group, the publication of the calendar this year presents a marvelous opportunity for the two libraries to promote their collections and services.

The 2003 calendar can be purchased for $12.95, plus applicable California sales tax and $3.00 shipping and handling for the first item; add $.50 for each additional item.

Make checks payable to UC Regents. Mail your order to: Calendar Sales, 412 McLaughlin Hall, University of California, Berkeley, CA 94720-1720. Credit card sales also available; please telephone the Transportation Library at: 510-642-3604 for details.

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FREE PUBLICATIONS

The following duplicates were received at the Archives and are available for free by sending an email to Paige Wooden at pwooden@library.berkeley.edu or faxing (510) 642-9143.

The Effects of land use change and intensification on the San Francisco estuary. San Francisco Bay Conservation and Development Commission, Center for Environmental Design Research. San Francisco Estuary Project, 1992.

Translation of reports on special problems of water technology: volume 9, Adsorption, 1975. Environmental Protection Agency, Office of Research and Development, Municipal Environmental Research Laboratory, 1976.

Action plan for reducing, mitigating, and controlling hypoxia in the northern Gulf of Mexico. Mississippi River/Gulf of Mexico Watershed Nutrient Task Force, 2001.

Proceedings of the Symposium on water filtration, the state of the art [held at] Berkeley, California, May 14, 1969 [and] Los Angeles, California, May 16, 1969. Sponsored by the Bureau of Sanitary Engineering, 1969.

Watersheds '94: respect, rethink, restore. Proceedings of the Fifth Biennial Watershed Management Conference, Ashland Hills Inn, Ashland, Oregon, November 16-18, 1994. Centers for Water and Wildland Resources, University of California, Davis, 1995. Water Resources Center report no. 86.

What is watershed stability?: a review of the foundation concept of dynamic equilibrium in watershed management. Proceedings of the Sixth Biennial Watershed Management Conference, October 23-25, 1996. Centers for Water and Wildland Resources, University of California, 1997. Report (California Water Resources Center) no. 92.

Western watersheds: science, sense, strategies : proceedings of the Seventh Biennial Watershed Management Council Conference October 19-23,1998, Boise, Idaho. Watershed Management Council. Centers for Water and Wildland Resources, 2000. Water Resources Center report no. 98.

California State Water Project: past, present, future. Office of Water Education, 2000.

150 years of California's water history by Joyce Tokita. DWR news. Fall 1999.

Water quality in the central Arizona basins, Arizona, 1995-98 by Gail E. Cordy et al. U.S. Geological Survey, 2000.

Wastewater management: current policies and future options: final report. Apogee Research, Inc. for the National Council on Public Works Improvement, 1987.

Infrastructure policy issues in water supply: final report. Wade Miller Associates, 1987.

Technical appendix A for the water contracting EISs: water needs analyses. U.S. Dept. of the Interior, Bureau of Reclamation, Mid-Pacific Region, 1988.

Decision criteria for residuals management in agriculture. University of California : the Agricultural Issues Center, the Giannini Foundation of Agricultural Economics, the Kearney Foundation, 1986.

Environmental impact assessment, Dow Petrochemical Project: Pittsburg expansion, Contra Costa County, Montezuma site, Solano County. J.B. Gilbert & Associates, 1976.

A guide to customer incentives for water conservation. U.S. Environmental Protection Agency, Office of Water, 1994.

Flood plain information: Green Valley, Dan Wilson, and Suisun Creeks, Cordelia, California. The Department of the Army, Sacramento District, Corps of Engineers ; prepared for Solano County, 1972.

Water resources: the state of the infrastructure by Kyle E. Schilling. National Council on Public Works Improvement, 1987.

Watershed climate, geohydrology, and water quality: a final report on Task II-3 . Water Resources Engineers, Inc., 1970.

Groundwater pollution in Europe: proceedings of a conference organized by the Water Research Association in Reading, England, September 1972. Water Information Center, 1974.

Optimal expansion of a water resources system by D. T. O'Laoghaire and D. M. Himmelblau. Academic Press, 1974.

Groundwater resources: investigation and development by S. Mandel, Z.L. Shiftan. Academic Press, 1981.

Water in synthetic fuel production: the technology and alternatives by Ronald F. Probstein, Harris Gold. MIT Press, 1978.

Energy; a crisis in power, by John Holdren and Philip Herrera. Sierra Club 1971.

Water renovation and reuse by Hillel I. Shuval. Academic Press, 1977.

Confessions of the power trust; a summary of the testimony given in the hearings of the Federal Trade Commission on utility corporations pursuant to Resolution no.83 of the United States Senate approved February 15, 1928. [1st ed.]. E. P. Dutton & Co., 1932.

Water, power, and politics in the Central Valley Project, 1933-1967 by Charles Eugene Coate. 1969.

Water demands for expanding energy development by George H. Davis and Leonard A. Wood. U.S. Geological Survey, National Center, 1974.

California Central Valley unimpaired flow data. State of California, the Resources Agency, Department of Water Resources, Division of Planning. 2nd ed., 1987.

In-situ volatilization of selenium: II. Evaporation ponds: final report by W.T. Frankenberger, Jr. and E.T. Thompson-Eagle, Dept. of Soil and Environmental Sciences, University of California, Riverside. San Joaquin Valley Drainage Program, 1989.

Report on a systematic study of the algae of sewage oxidation ponds by Paul C. Silva and George F. Papenfuss. State Water Pollution Control Board, 1953.

Least-cost CVP yield increase plan. U.S. Dept. of the Interior, Bureau of Reclamation, Mid-Pacific Region, U.S. Fish and Wildlife Service. 1995.

A primer on climatic variability and change in the Southwest by Robert Merideth. National Park Service, Intermountain Region, U.S. Department of the Interior. Udall Center for Studies in Public Policy, University of Arizona: Institute for the Study of Planet Earth, University of Arizona, 2001.

A study of recreational use and water quality of reservoirs, 1959-1961. California Bureau of Sanitary Engineering, 1961.

Tecolote Tunnel; technical record of design and construction; constructed 1950-1956; Cachuma Project, California. United States Bureau of Reclamation, 1959.

California domestic water supplies. California Bureau of Sanitary Engineering, 1962.

Climate change 2001: impacts, adaptations, and vulnerability: summary for policymakers, a report of Working Group II of the Intergovernmental Panel on Climate Change and technical summary of the Working Group II. IPCC Secretariat/World Meterological Organization, 2001.

Proceedings of a Workshop on Economic Non-market Evaluation of Losses to Fish, Wildlife and Other Environmental Resources: Monterey, CA, November 14-15, 1986. Bay Institute of San Francisco, 1987.

Bay/Delta protection plan: making every drop count: news clips. Bureau of Reclamation, Public Affairs Office, 1994.

Inventory of rare and endangered vascular plants of California edited and with text by W. Robert Powell. California Native Plant Society, 1974.

Water infrastructure: information on federal and state financial assistance: report to Congressional requesters. United States General Accounting Office, 2001.

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