

Curriculum Vitae of Gregory Gartrell, Ph.D., P.E.

Employment History:

2018-Present, Adjunct Fellow, Public Policy Institute of California
2013-Present: Consulting Engineer
1988 ó Retirement in 2013, Contra Costa Water District.
Assistant General Manager 2001-2013
Director of Planning 1995-2001
Principal Engineer 1993-1995
Division Engineer 1988-1992
1985 - 1988, Vice President and Senior Engineer, Flow Science, Inc.
1983 - 1984, HYDRATEC, Paris, France
1982 - 1983, Laboratoire National d'Hydraulique, Électricité de France, Chatou, France
1979 - 1982, Chaim Weizmann Research Fellow, California Institute of Technology

Education:

B.S. with Honor, 1973 California Institute of Technology, Pasadena, CA
M.S., Environmental Engineering Science, 1974 California Institute of Technology
Ph.D., Environmental Engineering Science, 1979 California Institute of Technology
Water and Wastewater Leadership Center, 2003 Kenan-Flagler Business School, University of North Carolina

Awards

Association of California Water Agencies ø Lifetime Achievement Award, 2013
Contra Costa Water District Board of Directors ø Resolution in Honor of Achievements, 2013
United States Fish and Wildlife Service Recognition of Achievements, 2013
Association of California Water Agencies ø Excellence in Water Leadership Award, 1997
Hugo B. Fischer Award, 1997 for model development of the Bay-Delta system
Lorenz G. Straub Award for doctoral thesis on density-stratified flows, 1980
Elected to Sigma Xi, 1976; Tau Beta Pi, 1972

Memberships, Affiliations:

Member, Bay-Delta Conservation Plan Steering Committee 2007-2011
Member, Governor ø Stakeholder Coordination Group for a Delta Vision, 2007
Member, California Bay-Delta Public Advisory Committee [BDPAC], 2001-2007
Co-Chair, BDPAC Water Quality Subcommittee, 2001-2007
Co-Chair, CALFED Ecosystem Roundtable, 1996-2001
Chair, Operations and Fish Forum, CALFED Operations Group, 1995-2001
Chair, California Urban Water Agencies/Agriculture Caucus (CUWA/Ag) Technical Committee on Bay-Delta Standards for Bay-Delta Accord, 1994
Member, Bay-Delta Accord Ecosystem Restoration Steering Committee, 1994-96
Member, Water Quality Technical Advisory Committee to the Governor's Bay-Delta Oversight Council, 1993-94
Convener, Bay-Delta Modeling Forum 1994, Past-Convener, 1995
Member, San Francisco Estuary Project Technical Advisory Committee
Chair, State Water Resources Control Board Bay-Delta M&I Water Quality Workgroup, 1989-90

Professional Affiliations and Registrations

Registered Civil Engineer # C33021, State of California

Professional Experience:

While Assistant General Manager at the Contra Costa Water District (CCWD), Dr. Gartrell managed the Planning, Delta Projects, Water Resources, and Watershed and Lands Departments. His project accomplishments included:

- 1) Environmental documentation and permitting for CCWD's \$120 million Los Vaqueros Expansion Project;
- 2) CALFED's Los Vaqueros Expansion Study, a \$30 million feasibility study on expansion of the reservoir up to 500,000 acre-feet that led to the first phase expansion of the reservoir;
- 3) CCWD's Middle River Intake Project, a \$120 million pipeline and intake relocation to improve water quality;
- 4) CCWD's \$100 million Rock Slough Intake Replacement Project;
- 5) Engineering Design and Permitting of CCWD's \$35 million Mallard Slough Pump Station and Pipeline;
- 6) Engineering Design and Permitting of CCWD's \$120 million Multipurpose Pipeline Project;
- 7) CALFED's \$4 million Veale and Byron Tracts Water Quality Projects to remove the impacts of local agricultural drainage on water quality;
- 8) CCWD's Future Water Supply Implementation (a fifty-year strategic plan for improving the water supply reliability of CCWD), including a conservation program, water transfers and the renewal of CCWD's Central Valley Project Contract;
- 9) CCWD's 10-year, \$500 million Capital Improvement Program.

Dr. Gartrell developed and managed CCWD's Grants Program that obtained over \$100 million in grants for CCWD in 10 years, including a \$30 million grant for the Middle River Intake Project.

Delta Vision: Dr. Gartrell is a recognized authority on California water resources issues and on Delta hydrodynamics, and was appointed in 2007 by the Secretary of Resources to the Governor's Stakeholder Coordination Group, an advisory panel to the Governor's Blue-Ribbon Task Force on a Delta Vision. He has been involved in Bay-Delta activities since 1985.

CALFED: Dr. Gartrell was appointed by the Secretary of the Interior and the Governor of California to the Bay-Delta Public Advisory Committee at its formation in 2001, and was appointed Co-chair of its Water Quality Subcommittee. Dr. Gartrell was Co-chair of the CALFED Ecosystem Roundtable, an oversight and advisory committee for \$300 million in Sacramento-San Joaquin River Delta ecosystem restoration projects.

Bay-Delta Accord: Dr. Gartrell served in leadership roles in the negotiation and implementation of the 1994 Bay-Delta Accord. He chaired the CUWA/Ag technical team that developed the proposal that formed the basis for the Accord. He helped negotiate and develop consensus on the Accord and was among the Accord signatories. Dr. Gartrell helped lead implementation of the Bay-Delta Accord as Chair of the Operations and Fish Forum (charged with implementing the Accord with the State Water Project and the Federal Central Valley Project) and as a representative of Urban/Ag Stakeholders on the CALFED Operations Coordination Group. He received the 1997 Association of California Water Agencies' Excellence in Water Leadership Award for his work in developing, negotiating and implementing the Accord.

Los Vaqueros Project: Dr. Gartrell led the development of environmental documentation on project operations and Delta modeling necessary for the water rights and environmental permits of the \$450 million Los Vaqueros Project, the first reservoir permitted in California's Central Valley water system in over 15

years. Dr. Gartrell worked with U.S. Fish and Wildlife Service staff to obtain non-jeopardy biological opinions for the Project, and with State agencies to obtain the Project's water rights. He managed and directed the Planning, Permitting, and Environmental Documentation, including negotiation of all permits for the \$120 million Middle River Intake project (completed in 2010), the \$100 million Rock Slough Intake Replacement Project (completed in 2011) and the \$120 million Los Vaqueros Expansion Project, completed in 2012.

At CCWD, Dr. Gartrell managed the Water Resources group for over 25 years, and was in charge of District planning and environmental permitting for 20 years. He was in charge of CCWD's recreation and watershed management programs, including management of over 25,000 acres of land. He managed CCWD's planning efforts for renewal, replacement, and addition to its facilities and infrastructure, which includes 70 miles of major water conveyance serving a population of over 550,000 (as well as major industrial customers) and a treated water infrastructure that includes three treatment plants and over 750 miles of water mains serving a population of more than 250,000.

Publications

- Gartrell, Greg, Jeffrey Mount, Brian Gray, and Ellen Hanak. 2017. A New Approach to Accounting for Environmental Water: Insights from the Sacramento óSan Joaquin Delta. Public Policy Institute of California.
- Gartrell, G. and S.K. Friedlander, 1975, öRelating Particulate Pollution to sources: The 1972 California Aerosol Characterization Studyö, *Atmospheric Environment*, Vol. 9, pp. 279-299.
- Gartrell, G., 1979, öStudies on the Mixing in a Density-Stratified Shear Flow,ö Ph.D. Thesis, available as Report No. KH-R-39, W.M. Keck Laboratory of Hydraulics and Water Resources, California Institute of Technology.
- Gartrell, G., 1980, öVertical Flux Measurements in a Density-Stratified Shear Flow,ö IAHR, Second International Symposium on Stratified Flows, Trondheim, Norway.
- Gartrell, G., S.L. Heisler and S.K. Friedlander, 1980, öRelating Particulate Properties to Sources: The Results of the California Aerosol Characterization Experiment,ö pp. 665-714 in **The Character and Origins of Smog Aerosols**, Advances in Environmental Science and Technology, Vol. 9, G.M. Hidy et al. ed., John Wiley & Sons, N.Y.
- Gartrell, G. and E.J. List, 1990, öChapter 9: Stresses on Well Casing and Screenö, in **The Handbook of Ground Water Development**, The Roscoe Moss Company (ed.), John Wiley & Sons, New York.
- List, E.J., G. Gartrell and C.D. Winant, 1990, öDiffusion and Dispersion in Coastal Waters”, *Journal of Hydraulic Engineering*, ASCE, Vol 116, No. 10, October 1990, pp 1158-1179
- Burt, C.M., and Gartrell, G., 1991, öCanal Models and Youö, ASCE Task Committee on Irrigation Canal System Hydraulic Modeling, presented at the ASCE National Conference on Irrigation and Drainage Engineering, Honolulu, HI, July 22-26, 1991.
- Gartrell, G., 1993, öQuantification of Uncertainties in Water Quality Models with Application to the Sacramento-San Joaquin Deltaö, ASCE National Conference on Hydraulic Engineering, San Francisco, July, 1993.
- Gartrell, G., 1993, öPredicting Water Quality at Municipal Intakes -Part 2: Application to the Southern Sacramento-San Joaquin Deltaö, ASCE National Conference on Hydraulic Engineering, San Francisco, July, 1993.
- Denton, R. A., Gartrell, G., & Nelson, A. W., 1993, öModeling the Operation of a Water Quality Reservoir and its Effect on the Sacramento-San Joaquin Deltaö, ASCE National Conference on Hydraulic Engineering, San Francisco, July, 1993.
- Campbell, J. E., Briggs, D.A., Denton, R.A., & Gartrell, G. 2002 öWater quality operation with a blending reservoir and variable sourcesö, *J. Water Resour. Plng. Mgmt.*, ASCE, Volume 128, Issue 4.