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Professional Experience

- o Metropolitan Water District Southern Cal., Sacramento, Jun. 2002 - present.
- o Calif. Dept. of Water Resources, Sacramento, Aug. 1990 - Jun. 2002.
- o Pacific Gas and Electric, Sacramento, Oct. 1989 - Aug. 1990.
- o Los Angeles County Sanitation Districts, Feb. 1986 – Jul. 1989.
- o MWH (formerly JMM Engineers), Pasadena, Oct. 1984 - Feb. 1986.

Education

- o Ph.D., Civil and Environ. Engineering, University of California, Davis (Dec. 1994)
- o M.S., Environ. Engineering, W.E. Deuchler Fellow, University of Illinois, Urbana (Jan. 1985)
- o B.S., Civil Engineering, Highest Honors, University of Illinois, Urbana (May 1983)

Honors and Professional Affiliations

- o Convener, California Water & Environmental Modeling Forum, 2009-10.
- o Vice Convener, California Water & Environmental Modeling Forum, 2007-08.
- o California Water & Environmental Modeling Forum, Hugo B. Fischer Award, 2006.
- o MWDSC, Innovation/ Creativity Award, 2006.
- o MWDSC, Leadership Award, 2006.
- o Calif. Dept. of Water Resources, Meritorious Service Award, 1999.
- o CALFED, Draft PEIS/ EIR Superior Accomplishment Team Award, 1999.
- o Calif. Dept. of Water Resources, DSM2 Development Team Unit Citation, 1998.
- o ASCE Water Resources Plng. and Mgmt. Div. Outstanding Journal Paper Award, 1994.
- o Calif. Dept. of Water Resources, Outstanding Professional Accomplishment Award, 1994.
- o Calif. Professional Engineer Registration #C040795.

Refereed Publications

- o Hutton, P.H., Rath, J.S., Chen, L., Unga, M.J., and Roy, S.B. (2015). "Nine Decades of Salinity Observations in the San Francisco Bay and Delta: Modeling and Trend Evaluation." *J Water Resour. Plng. Mgmt.*, American Society of Civil Engineers, DOI: 10.1061/ (ASCE)WR.1943-5452.0000617.
- o Fox P., Hutton, P.H., Howes, D.J., Draper, A.J., and Sears, L. (2015). "Reconstructing the Natural Hydrology of the San Francisco Bay-Delta Watershed." *Hydrology and Earth System Sciences* 19:4257–4274.
- o Howes, D.J., Fox, P., Hutton, P.H. (2015). "Evapotranspiration from Natural Vegetation in the

Central Valley of California: Monthly Grass Reference-Based Vegetation Coefficients and the Dual Crop Coefficient Approach., *J Hydrd. Eng.*, American Society of Civil Engineers, DOI: 10.1061/ (A SCE)HE.1943-5584.0001162.

o Hutton, P.H. and Chung, F.I. (1994). "Bromine Distribution Factors in THM Formation." *J Water Resour. Plng. Mgmt.*, American Society of Civil Engineers, 120(1), 1-16.

o Hutton, P.H. and Chung, F.I. (1994). "Correlating Trihalomethane Data." *J Environ. Eng.*, American Society of Civil Engineers, 120(1), 219-241.

o Hutton, P.H. and Chung, F.I. (1992). "Simulating THM Formation Potential in Sacramento Delta: Part I." *J Water Resour. Plng. Mgmt.*, American Society of Civil Engineers, 118(5), 513-529.

o Hutton, P.H. and Chung, F.I. (1992). "Simulating THM Formation Potential in Sacramento Delta: Part II." *J Water Resour. Plng. Mgmt.*, American Society of Civil Engineers, 118(5), 530-542.

Conference Proceedings & Other Publications

o *CALFED Bay-Delta Program Programmatic EIS/EIR* (1999). June Draft.

o *Calif. Water Plan Update, Bulletin 160-98*. (1998). Calif. Dept. of Water Resources, Sacramento.

o Enright, C., Hutton, P.H. and Chung, F.I. (1996). Transport of Dormant Spray Pesticides in the San Francisco Bay-Delta. *Proceedings 1996 North American Water and Environment Congress*, ASCE, Anaheim, Calif., C.T. Bathala, Ed.

o Enright, C., Mahadevan, N. and Hutton, P.H. (1996). Simulation of Dormant Spray Pesticide and Dissolved Organic Carbon Transport during 1993. *IEP Newsletter*, Interagency Ecological Program for the Sacramento-San Joaquin Estuary, 9(2), 27-31.

o *Estimation of Delta Island Diversions and Return Flows* (1995). Calif. Dept. of Water Resources, Division of Planning, Sacramento, Calif., Feb.

o Hutton, P.H. and Enright, C. (1993). Simulating THM Precursors Transport with DWRDSM. *Proceedings 1993 Hydraulic Div. National Conf.*, ASCE, San Francisco, Calif., H.W. Shen, Ed. 821-826.

o Hutton, P.H. (1994). Bay-Delta THM Formation Potential: Data Collection and Mathematical Modeling. *IEP Newsletter*, Interagency Ecological Program for the Sacramento-San Joaquin Estuary, 7(4), 12.

o Hutton, P.H., Sandhu, N. and Chung, F.I. (1996). Predicting THM Formation with Artificial Neural Networks. *Proceedings 1996 North American Water and Environment Congress*, ASCE, Anaheim, Calif., C.T. Bathala, Ed.

o Hutton, P.H., Mahadevan, N. and Chung, F.I. (1996). Simulating DBP Precursor Transport in Sacramento Delta. *Proceedings 1996 North American Water and Environment Congress*, ASCE, C.T. Bathala, Ed.

o *Representative Delta Island Return Flow Quality for Use in DSM2*. (1995). Calif. Dept. of Water Resources, Division of Planning, Modeling Support Branch, Sacramento, Calif.

o *Trihalomethane Formation Potential in the Sacramento-San Joaquin Delta: Mathematical Model Development*. (1991). Calif. Dept. of Water Resources, Division of Planning, Sacramento, Calif.

Conference Presentations

o Application of SANMAN: A San Joaquin River Salinity Management Spreadsheet Model, presented at the CWEMF Annual Meeting, Pacific Grove, Calif., Mar. 2005.

o Delta and Aqueduct Taste and Odor Precursors: Modeling Status, presented at the CWEMF Workshop on Overview of Delta Nutrient Water Quality Problems: Nutrient Load – Water Quality Impact Modeling, Sacramento, Calif., Mar. 2008.

o Delta Island Consumptive Use Model, presented at the Annual Interagency Ecological Program Workshop & Bay-Delta Modeling Forum, Pacific Grove, Calif., Mar. 1995.

o Delta Island Diversions and Returns, presented at the Bay-Delta Modeling Forum Workshop on Delta Modeling for End Users, Sausalito, Calif., Nov. 1995.

- o Delta Salinity Gradient (DSG) Model, presented at the 8th Biennial Bay-Delta Science Conference, Sacramento, Calif., Oct. 2014.
- o DWR's Delta Model on DBP Precursors, presented at the American Water Works Association Calif.-Nevada Section Spring Conference, San Jose, Calif., Apr. 1992.
- o Estimating Combined Old and Middle River Flow, presented at the CWEMF Annual Meeting, Pacific Grove, Calif., Feb. 2008.
- o Forecasting Delta Turbidity Conditions, presented at the 7th Biennial Bay-Delta Science Conference, Sacramento, Calif., Oct. 2012.
- o Life after Bulletin 160-98: Ongoing DWR Statewide Planning Program Elements, presented at the Bay-Delta Modeling Forum Workshop on Approaches and Problems for Long-Term Regional Water Planning, Sacramento, Calif., Feb. 1999.
- o Metropolitan's Evaluation of the 2003 Colorado River Contingency Transfer, presented at the CWEMF Annual Meeting, Pacific Grove, Calif., Feb. 2003.
- o Metropolitan's Policy Principles on Long-Term Delta Actions, presented at the Bay Planning Coalition's 19th Annual Decisionmakers Conference, Oakland, Calif., Mar. 2006.
- o Metropolitan's 2003 Colorado River Contingency Transfer in Retrospect, presented at the CWEMF Annual Meeting, Pacific Grove, Calif., Feb. 2004.
- o Modeling Delta Flow-Turbidity Relationships with Artificial Neural Networks, presented at the CWEMF Annual Meeting, Folsom, Calif., Apr. 2012.
- o Modeling of Delta Standards Using ANN Approach in the Joint CALSIM Model, presented at the Annual Interagency Ecological Program Workshop & Bay-Delta Modeling Forum, Pacific Grove, Calif., Feb. 2001.
- o Natural Delta Outflow Water Balance, presented at the CWEMF Annual Meeting, Folsom, Calif., Feb. 2014.
- o Neural Networks and THM Prediction, presented at the Bay-Delta Modeling Forum Workshop on Drinking Water Quality, Sacramento, Calif., Oct. 1995.
- o New Empirical Bay-Delta Salinity Model, presented at the CWEMF Annual Meeting, Folsom, Calif., Apr. 2013.
- o Nine Decades of Salinity Observations in Suisun Bay & Western Delta, presented at the CWEMF Annual Meeting, Folsom, Calif., Apr. 2013.
- o Overview of Recent Efforts to Characterize Natural Delta Outflow, presented at the CWEMF Annual Meeting, Joint Session with the Interagency Ecological Program, Folsom, Calif., Feb. 2014.
- o San Joaquin River Salinity Management Model, SANMAN, presented at the CWEMF Technical Workshop on San Joaquin River Valley Modeling, Sacramento, Calif., Nov. 2005.
- o SANMAN: Decision Support for the DIP's San Joaquin River Salinity Management Plan, presented at the CWEMF Annual Meeting, Pacific Grove, Calif., Mar. 2005.
- o Simulating DBP Precursor Transport, presented at the Bay-Delta Modeling Forum Workshop on Drinking Water Quality, Sacramento, Calif., Oct. 1995.
- o Validation of DSM2 Volumetric Fingerprints Using Grab Sample Mineral Data, presented at the CWEMF Annual Meeting, Pacific Grove, Calif., Mar. 2006.