

Potential SMP Peer Reviewers



Draft Peer Review Objective

The objective of the Seepage Management Plan (SMP) Peer Review is to provide Reclamation with confirmation of the processes described in the SMP and, where appropriate, guidance on revisions to the document to increase the document's technical accuracy.

Potential Peer Reviewers

This list contains a brief summary of relevant experience for a number of people that have been recommended to be part of the peer review panel. These summaries are not intended to be complete, but rather to give a summary of their main, relevant experience.

Al Blair, Ph.D., P.E.

Consultant, AW Blair Engineering

Dr. Blair has over 30 years of experience in agricultural irrigation, groundwater, and surface water resource systems. His consulting experience includes:

- Aquifer Modeling, Aquifer Test Evaluations, Pumping Plant, and Water Well Design
- Canal and Reservoir Seepage Measurement and Mitigation
- Evaluation and Modeling of Groundwater Dewatering System
- Expert Witness – Groundwater and Surface Water Rights, Water Use, and Hydrology
- Hydrographic Survey of Historical Groundwater Use
- Agricultural Flow Measurement Training and Design of Flow Meter Calibration Facility
- Flow Measurement Telemetry and Data Collection Systems
- Hydroelectric and Irrigation Regulating Reservoir Feasibility Studies
- Open Channel Flow Measurement Systems Design and Installation

His research experience includes:

- Canal Seepage, Infiltration Measurement, and Infiltrometer Design
- Surface Irrigation Design and Efficiency Evaluation
- Automation and Process Control of Pumping Plants and Pipe Systems
- GIS/GPS Applications in Water Rights Evaluations

He has been an expert witness for groundwater and surface water rights, water use, and hydrology issues. He has also been both a district engineer and a consulting engineer for a number of water districts.

Biographical information obtained from:

Resume

Charles M. Burt, Ph.D., P.E., CID

Cal Poly, Irrigation Training and Research Center

Dr. Burt has authored or co-authored 120 articles and study guides, related to on-farm irrigation, canal modernization, and efficiency (See below for a partial list of publications). He was the first chairman of the IA Certification Board. He has extensive field and design experience in drip, sprinkler, and surface irrigation techniques. He also has extensive field and theoretical experience in canal, pipeline, and pump modernization. Dr. Burt has worked in 26 countries across the globe.

Biographical information obtained from:

<http://www.itrc.org/faculty/burt.htm>

Florence Cassel-Sharma, Ph.D.

Fresno State, Center for Irrigation Technology

Florence Cassel Sharma is a researcher with the Center for Irrigation Technology at Fresno State. Cassel has studied salts on the west side of the San Joaquin Valley and ways to compensate for presence of salinity when it comes to seeding, fertilizing and irrigating. Her experience includes:

- Open-Field CO₂ Enrichment Using Drip Irrigation Systems
- Assessment of Canal Seepage Using Electromagnetic Technique
- Salinity Assessment for Precision Farming in Cotton Systems
- Assessing Spatial and Temporal Variability of Soil Salinity on Farms Implementing Integrated Drainage Management Practices
- Estimating Crop Evapotranspiration and Soil Salinity from Remote Sensing Imagery
- Integrating remote sensing techniques to determine extent of salinity in the San Joaquin Valley of California
- Use of Remote Sensing Techniques for Improving Soil and Crop Management Practices
- Utilizing Ethanol CO₂ Emissions to Increase Crop Productivity and Water-Use Efficiency
- Reclamation of saline-sodic soils for tomato production using calcium fertigation and acidification
- Development of an integrated decision support system to optimize irrigation scheduling and water use efficiency

Biographical information obtained from:

<http://directory.csufresno.edu/detailsFacultyStaff.asp?ID=1341>

<http://itrackpermits.com/Projects/QuickSearchResults.aspx?keyword=Cassel%20Sharma>

Steven Deverel, Ph.D.

Consultant, HydroFocus

Steven J. Deverel has over 27 years of hydrologic problem-solving experience in California. Dr. Deverel analyzes groundwater systems, quantifies chemical and physical processes in soils, and evaluates groundwater- and surface-water quality. He is a recognized expert on hydrologic and water quality issues in the Sacramento-San Joaquin Delta and San Joaquin Valley, California. Dr. Deverel is a registered professional hydrologist certified by the American Institute of Hydrology and is registered with the State of California as a professional geologist.

His work includes:

- Conducting surface and groundwater quality assessments.
- Developing analytical tools and numerical models to evaluate water movement and solute transport.
- Quantifying chemical and physical processes in the saturated and unsaturated subsurface.
- Applying statistical techniques to analyze land and water resources.
- Evaluating land subsidence.
- Determining water sources using geochemical and age-dating techniques.

Biographical information obtained from:

<http://www.hydrofocus.com/deverelresum.html>

Thomas Harter, Ph.D.

UC Davis, Department of Land, Air and Water Resources

Thomas Harter, Ph.D., received a B.S. in hydrology from the Universities of Freiburg, Germany and a M.S. in hydrology from the University of Stuttgart, Germany. He received his Ph.D. in hydrology (with emphasis on subsurface hydrology) at the University of Arizona, where he became the 1991 Harshbarger fellow for outstanding research in subsurface flow and transport modeling. In 1995, he joined the faculty at the Department of Land, Air, and Water Resources, University of California, Davis. His research focuses on nonpoint-source pollution of groundwater, groundwater resources evaluation under uncertainty, groundwater modeling, and contaminant transport. Dr. Harter's research group has done extensive modeling, laboratory, and field work to evaluate the impacts of agriculture and human activity on groundwater flow and contaminant transport in complex aquifer and soil systems. In 2007, Dr. Harter was appointed Robert M. Hagan Endowed Chair in Water Management and Policy. Also in 2008, Dr. Harter's research and extension program received the Kevin J. Neese Award in recognition of its efforts to engage scientists, regulators, farm advisors, dairy industry representatives, and dairy farmers to better understand the effects of dairy operations on water quality. His interests include flow and transport processes in ground water and in the vadose zone; stochastic analysis of such processes in heterogeneous porous systems; numerical modeling; assessment and remediation of ground water contamination; nonpoint source pollution of ground water; geostatistics.

Biographical information obtained from:

<http://groundwater.ucdavis.edu/People/>

http://ucanr.org/sites/groundwater/People/tharter_resume/#publications

Jack Keller, Ph.D.

Keller-Bliesner Engineering

Dr. Keller is a nationally and internationally recognized expert in the design, implementation, and management of irrigation systems. He is currently involved in consulting activities related to efficient irrigated agricultural development; river basin water management and conservation planning; irrigation water monitoring, verification and conservation planning; and developing efficient low-cost irrigation technologies for small farms.

He is the founder and presently Chief Executive Officer of Keller Bliesner Engineering LLC. He is also Professor Emeritus in the Biological and Irrigation Engineering Department at Utah State University, where he was Department Head between 1980 and 1986. Prior to becoming a professor at Utah State University in 1960, he was the Chief Irrigation Engineer in charge of product development for W.R. Ames Company, a leading U.S. manufacturer of irrigation equipment.

Dr. Keller is the author of more than 90 technical papers, 50 major consulting reports, 9 handbooks and 2 textbooks in the areas of agricultural water resources planning and engineering, on-farm water management, and irrigation system design. He has received 4 US patents related to sprinkle, surface, and drip irrigation. He has been honored with the Person of the Year award from the US Irrigation Association, Research Excellence award from the College of Engineering at USU, Engineer of the Year Award for the State of Utah, ASAE Award for the Advancement of Surface Irrigation, Scientific American 50 Award, and elected to membership in the US National Academy of Engineering.

Biographical information obtained from:

<http://www.kelbli.net/jkeller.aspx>

Joel Kimmelshue, Ph.D.

Consultant, NewFields

Dr. Kimmelshue is a Principal Soil and Agricultural Scientist with NewFields. He holds a Ph.D. in Soil Science with a concentration in Water Resources from North Carolina State University in addition to his Certification as a Professional Soil Scientist (CPSS). He has worked in the field of soil science and agronomy for over 14 years. His extensive consulting experience includes practical and applied solutions for development and management of agricultural-based soil/water/plant systems; especially irrigated systems. This technical expertise also includes water resources science and planning, land reclamation, soil/plant nutrient dynamics and management, irrigation and drainage in arid and humid climates, soil classification, crop production, land application of municipal and agricultural wastes, water rights evaluations, vegetative and non-vegetative erosion control, and revegetation reclamation efforts. He is experienced in multi-stakeholder settings and works closely with owners as well as regulatory, agency, and consulting teams to develop workable and cost-effective approaches. Dr. Kimmelshue has extensive project management and technical skills, performing technical leadership and/or management on projects and tasks totaling nearly \$8 million dollars over the past 14 years. Dr. Kimmelshue also has first-hand production agriculture experience as a result of growing up and working on a diversified tree and row crop farming operation in northern California. He still maintains an ownership and management interest in that family farming operation.

Biographical information obtained from:

http://www.newfields.com/aer/newfields_joel_kimmelshue.html

Ike McElvany

McElvany Incorporated

Mr. McElvany's firm, McElvany Inc., has designed and installed a majority of the interceptor lines in the Los Banos area for the past decade. He has significant experience in the local hydrogeologic conditions experience along the San Joaquin River.

Nigel W.T. Quinn Ph.D., P.E., D.WRE

Lawrence Berkeley National Lab, Reclamation

Nigel Quinn leads the HydroEcological Engineering Advanced Decision Support research group (HEADS) at Berkeley National Laboratory which specializes in the development of environmental decision support systems to improve understanding and find solutions to complex water resources and water quality problems in California and world-wide. He has worked at Berkeley National Laboratory for the past 18 years and holds adjunct faculty appointments at California State University Fresno where he is an Adjunct Research Professor in the Department of Plant Science and at the University of California, Merced where he is an Associate Research Engineer.

A primary research focus during past decade has been on developing decision making tools for assessing the impacts of drainage water quality projects on the west side of the San Joaquin Valley with an emphasis on salinity and selenium drainage. Field research has included investigations of natural selenium in-transit losses in wetland channels used for drainage discharge and application of the concept of real-time water quality management in the San Joaquin Basin of California as a means of improving the scheduling of both agricultural and wetland drainage return flows to coincide with San Joaquin River assimilative capacity. Other agro-ecology projects include the operation and performance testing of an algal-bacterial bioremediation plant for removing selenium from agricultural drain water in a major west-side irrigation district. Groundwater and surface water quality modeling projects have been largely focused on developing a better quantitative understanding of the relationship between irrigation water management and drainage salt and selenium loading to the San Joaquin River.

Biographical information obtained from:

<http://esd.lbl.gov/about/staff/nigelquinn/>

Mark Roberson, Ph.D.

Consultant

Dr. Roberson has 20 years of urban and agricultural water use efficiency and conservation. As a Senior Water Management Specialist for the Imperial Irrigation District, he participated in the implementation of the Imperial Irrigation District - Metropolitan Water District water conservation agreement including impacts to the Salton Sea. He currently serves as staff consultant for the Sacramento Area Water Forum to provide technical assistance on urban and agricultural water conservation, groundwater management and water use analysis. He has provided planning services and technical assistance to the Agricultural Water Management Council. He has provided technical assistance to districts preparing water management plans. He has served on statewide committees for various water conservation efforts.

Biographical information obtained from:
Resume

Albert Steele, P.G., C.H.

Consultant

Mr. Steele has worked as a professional groundwater hydrologist for over 35 years, 13 years with the County of Fresno and 22 years with the State of California, Department of Water Resources. This work included infiltration studies at local landfills and extensive subsurface exploration for groundwater banking projects, as well as sewage disposal systems. Mr. Steele served on the advisory group for the San Joaquin River Restoration project in 2007, which included review of proposed groundwater monitoring networks. He has designed, installed, collected data, and interpreted data from hundreds of monitoring wells. This monitoring work included developing monitoring protocols. This work has made him very familiar with all aspects of groundwater in the San Joaquin Valley. Mr. Steele is currently the vice president for the Fresno Chapter of the California Groundwater Resource Association.

Biographical information obtained from:
Resume

Bill Weir, Ph.D.

UCCE, Merced County Cooperative Extension, Farm Advisor, Emeritus

Dr. Weir earned a bachelor's degree in chemistry at Texas A & M University, a master's degree in vegetable crops at UC Davis, and a Ph.D. in soil science at UC Davis. He began his career with the University of California in 1966 as a staff research associate in the UC Davis vegetable crops department. He was appointed field crops farm advisor in Merced County in 1974. Weir regularly conducted variety trials, insect management research, and nutrition studies on cotton, sugar beets, corn, dry beans, rice, barley, wheat, rye and oats. Dr. Weir also took on responsibility for vegetable crops in Merced County. Weir authored or co-authored 195 peer-reviewed or scientific papers and received numerous awards, including, in the last decade, 1993 and 1995 Certificate of Excellence Awards from the American Society of Agronomy, the 1995 Distinguished Service Award for Outstanding Researcher from the UC Division of Agriculture and Natural Resources Assembly Council, the 1996 Certificate of Excellence for Extension Education Award from California Cotton Review, and the 1997 Outstanding Individual in Agriculture Award from the Agribusiness Committee in Merced County.

Biographical information obtained from:
<http://cemerced.ucdavis.edu/about/contact/?facultyid=3898>
<http://ucanr.edu/News/?uid=99&ds=191>

Peter Vorster

The Bay Institute

Peter Vorster has over 33 years of experience as a hydrogeographer, much of it focused on California's water resources and the landmark environmental water conflicts in the Eastern Sierra (Mono Lake and the Owens Valley) and the San Francisco Bay-Delta watershed. He was a principal researcher on the California Water Atlas and a key player in the successful effort to restore Mono Lake and its streams. Currently Peter is an independent consultant for environmental groups working on stream restoration and environmental flow management. He is also an employee with The Bay Institute, a public interest research and advocacy. For The Bay Institute, he leads the technical effort on the San Joaquin River restoration program, is a principal for the Ecological Scorecard project, and works with the Oakland Museum on their urban creek and watershed map series.

Peter's expertise and interests include water management, water balance and system operations modeling, environmental restoration, climatology, historical geography of California, mountain environments, geomorphology, and museum education.

Biographical information obtained from:

<http://www.bay.org/about-us/staff/peter-vorster>
