

Biographies and Contact Information

Geothermal Leasing, Unitization and Water Use Legal Issues Workshop

Geothermal Resources Council 2014 Annual Meeting
September 26 and 27, Oregon Convention Center, Portland Oregon

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ANITA ANDAZOLA - Speaker

Anita Andazola serves in the Portland District of the US Army Corps of Engineers. In the 1880s and 1890s, Congress directed the Corps to prevent dumping and filling in the nation's harbors under the Rivers and Harbors Act of 1899. Under its current regulatory program the Corps of Engineers has authority over work on structures in navigable waterways under Section 10 of the Rivers and Harbors Act of 1899 and over the discharge of fill material under Section 404 of the Clean Water Act. Corps authority applies to wetlands and other valuable aquatic areas through the United States. Prior to working for the Corps of Engineers, Ms. Andazola worked for the US Forest Service within the Hydrology, Soils and Wildlife Departments before becoming a Fisheries biologist. She holds a Bachelor's degree from Humboldt State University in Natural Resources Planning and has resided on the coast of southern Oregon since 2007.

Anita Andazola, Biologist

Corps of Engineers Regulatory Compliance & Enforcement

2201 Broadway, Ste. C

North Bend, Oregon 97459

Phone: 541.756.5316

Email: Anita.M.Andazola@usace.army.mil

Portland District Regulatory: <http://www.nwp.usace.army.mil/Missions/Regulatory.aspx>

Permitting 101: <http://137.161.203.100/regulatory/module/Main.html>

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PAULA BLAYDES – Co-Chair and Speaker

Paula Blaydes is the Principal of Blaydes & Associates, which she founded in 1981, providing environmental permitting, regulatory and governmental affairs consulting services in the western U.S. and Internationally. Blaydes has permitted 10 geothermal power plants in California on private and federally owned lands including the first new power plant at The Geysers, California in 21 years in less than one year. She has been a trainer at environmental and permitting courses in the U.S. and abroad, including on water issues. In 2007, Paula authored the *California Geothermal Permitting Guide* for the California Geothermal Energy Collaborative/California Energy Commission. Blaydes has a B.A. in Environmental Studies and Land Use Planning from Sonoma State University, California. She is a member and former Vice-President of the Geothermal Resources Council, as well as The Geysers Geothermal Association.

Paula Blaydes, Principal

Blaydes & Associates

1275 Fourth Street #214

Santa Rosa, CA 95404

Phone: 707.537.8727

Cell: 707.889.2540

Email: peblaydes@comcast.net

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TONI BOYD – Speaker

Tonya "Toni" Boyd has worked in geothermal direct use and small power applications technology and education for 20 years, primarily as an engineer for the Oregon Institute of Technology's (OIT) internationally recognized Geo-Heat Center. In addition to Boyd's management of the website, direct use data development, geothermal outreach and student training responsibilities, she helped permit and managed the exploration and development of a 2MW geothermal power plant on the OIT campus along with John Lund. Along with the geothermal direct use heating and a solar installation, that achievement placed OIT in the forefront of colleges and universities getting 100% of their energy and electricity from renewable energy resources located on campus. Toni serves on the Board of Directors of the Geothermal Resources Council, has received GRC's Special Achievement award for her tireless provision of technical and educational services, and serves on the 2014 Annual Meeting Committee. Boyd has published and presented extensively on geothermal energy and began providing consulting services on district heating and other direct uses in October 2014. Toni has a BS in engineering from OIT.

Geo-Heat Center
Oregon Institute of Technology
Klamath Falls, OR 97601
Phone: 541-885-1750
Email: geoheat@oit.edu

After October 3: Toni Boyd, Geothermal Potentate
Phone: 541-891-2571
Email: toniboydgeo@gmail.com

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JENNIE BRICKER - Speaker

Jennie Bricker is an attorney in private practice, licensed in Oregon, Washington, and Nevada. She has 16 years' experience in, and has presented and published extensively on environmental permitting, renewable energy, water law, and title and boundary issues. Until the end of 2013, Bricker was a partner in the Portland, Oregon office of Stoel Rives LLP. She opened her law and mediation practice on January 1st, 2014. Jennie earned her J.D. magna cum laude from Northwestern School of Law, Lewis & Clark College.

Jennie Bricker Law and Mediation
Portland, Oregon
Phone: 503-928-0976
Email: jennie@jbrickerlaw.com
Website: jbrickerlaw.com

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KATHLEEN CALLISON – Speaker and Water Panel Moderator

Kathleen Callison helps clients navigate complex legal, regulatory and institutional issues in the development and use of water and geothermal resources. With a strong technical background and diverse public- and private-sector experience, Callison develops practical, sustainable solutions to meet project goals. She was the principal drafter of 2013 legislation updating Washington State's geothermal law. Kathy assists clients with water rights, water supply approval, water and geothermal permits, recycled water permits, water right conveyances and transfers, injection registrations, and wastewater permits. Her recent work includes providing consulting services for proposed district energy projects in Seattle and other cities in Washington State. In her previous work for a municipal utility Callison gained extensive practical experience managing exploration and production well drilling, environmental permitting, capital projects design and construction, and environmental mitigation projects. She is past co-chair of the Washington State Bar Association Water Law Conference, and holds a law degree from Seattle University and a Masters degree from the University of Washington focusing on natural resources. She has spoken and published extensively on water and geothermal resource issues.

Law Office of Kathleen Callison, PS
802 Irving Street, SW
Tumwater, WA 98512
Phone: 360.705.3087
Email: Callison@CallisonLaw.com.

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ANNA CARTER – Workshop Developer and Co-Chair

Anna Carter has worked in geothermal exploration and development and renewable energy education for over 30 years. While employed by CalEnergy in the 1980s, with responsibilities in federal and state leasing, permitting, and contract compliance, Carter made significant contributions to development of the Coso field and to exploration in the Pacific NW. Anna participating in the Citizens Committee that created the Newberry National Volcanic Monument in a collaborative process that resolved boundary issues for federal leasing. She has worked for major geothermal developers, state agencies, utilities, tribes and private landowners in geothermal policy, regulation, permitting, land/leasing, and grantwriting. Recognizing the need for geothermal public information materials as a driver for federal and state renewable energy policy and acceptance by the public, Carter authored award-winning geothermal and renewable energy educational materials. Anna has served several elected terms on the Geothermal Resources Council Board of Directors and is currently chairing the GRC Public Outreach Committee.

Anna Carter, Principal
Geothermal Support Services
1798 Larry Drive, Santa Rosa, CA 95403
Cell: 530.736.2299
Email: geothermalservices@gmail.com

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CHRIS CASTELLI - Speaker

Since the beginning of 2014, Chris Castelli has been the senior policy and legislative analyst in the Director’s Office. He started at Oregon Department of State Lands in 2004 as a property specialist, served as a land manager for various counties in western Oregon, and was the senior policy analyst for the Land Management Division from 2012 to 2013. Before coming to DSL, Chris held geologist positions at the Oregon Department of Transportation, the Santa Clara Valley Water District and an environmental engineering firm in Santa Cruz, California. He also was a policy and planning intern at DSL. Chris has an MBA in quantitative analysis from Willamette University; a B.S. in earth science from U.C. Santa Cruz; and an A.S. in chemistry from Santa Rosa Junior College.

Chris Castelli
Senior Policy and Legislative Analyst
Oregon Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301
Phone: 503.986.5280
Email: Chris.castelli@state.or.us
Website: <http://www.oregon.gov/DSL/pages/index.aspx>

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KAREN ENDRES – Speaker

Karen Lee Endres is the Minerals Hydrologist in the Mt Lewis Field Office, Battle Mountain District of the Nevada BLM. As Minerals Hydrologist, Endres oversees the largest concentration of hard rock mining in the US, as well as all other aspects of groundwater in the district. Prior to joining BLM, she worked for consulting, governmental and non-profit organizations. Karen holds a PhD in Environmental Engineering from Michigan Technological University specializing in groundwater modeling.

Karen Endres, Hydrologist
USDI Bureau of Land Management
Battle Mountain District Office
50 Bastian Road, Battle Mountain NV 89820
Phone: 775-635-4000
Email: kendres@blm.gov

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JOE FABEL - Speaker

Joe Fabel is a staff attorney with the California State Lands Commission. Since 2012, Joe has counseled the Commission's Mineral Resources Management Division on issues relating to geothermal and solid mineral leasing on state owned lands. He also represents the Commission in water and property boundary disputes along the Colorado River and is active in the Commission's role in marine oil spill prevention and the state's marine invasive species program.

Joe Fabel, Staff Attorney
California State Lands Commission
100 Howe Ave, Suite 100.South
Sacramento, CA 95825
Phone: 916.574.0398
Email: Joe.Fabel@slc.ca.gov

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JULIO GARCIA - Speaker

Julio Garcia is the Manager of Geothermal Production Analysis for Calpine at The Geysers Geothermal Field in northern California. In this capacity, Garcia provides supervision and leadership of The Geysers reservoir and production modeling team; develops and maintains geothermal resource models; maintains comprehensive, up-to-date knowledge of reservoir data and technology relevant to The Geysers field management; builds and maintains calibrated numerical simulation models of the reservoir-pipeline-power plant system and uses the model to forecast steam flows under different operational scenarios.

Julio Garcia
Calpine Corporation
10350 Socrates Mine Road
Middletown, CA 95461
Phone: 707-431-6068
Email: Julio.Garcia@calpine.com
Website: http://www.calpine.com/media/Geysers_Factsheet.pdf

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SEAN E. HAGERTY – Speaker

Sean Hagerty is the Geothermal Program Lead for the Bureau of Land Management’s California State Office located in Sacramento. Prior to 1986, Hagerty was a geologist in the BLM’s El Centro Office, where he was involved with the permitting of Ormat’s Ormesa I Project on East Mesa, in Imperial County, California. Over the past 28 years, Hagerty has been involved in environmental reviews and permitting associated with geothermal power projects on federal leases at Coso Hot Springs, East Mesa, Glass Mountain, Casa Diablo/Mammoth Lakes, The Geysers and Wendel-Amedee. He has participated in geothermal regulation reviews culminating in major revisions in October 1998 and in May of 2007. More recently, Hagerty was involved in the development of the 2008 Truckhaven Geothermal Leasing Project Environmental Impact Statement (EIS) and Geothermal Leasing in the Western United States Programmatic (EIS). New BLM leasing projects include West Chocolate Mountains, and the Imperial Sand Dunes in the Imperial Valley, and the Haiwee project area, near Coso Hot Springs, in Inyo County. Sean received a Bachelor of Science degree in Geology from the University of California at Davis in 1978 and, prior to his federal career, worked for a short time as a mudlogger on natural gas wells.

Sean E. Hagerty, Geologist and
Geothermal Program Lead
California State Office, Div. of Energy & Minerals
USDI Bureau of Land Management
2800 Cottage Way, Suite W.1623
Sacramento, CA 95825.1886
Phone: 916.978.4375
Cell: 916.217.5919
Email: shagerty@blm.gov

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ROGER KNIGHT, P.E. - Speaker

Roger Knight, PE, is a Petroleum Engineer who has been in the energy business for 45 years working throughout the US and internationally. Roger as worked with the US Department of Energy and Mineral Development group for ten years where he has assisted tribes with all types of energy development and lease negotiations on tribal lands.

Roger Knight, PE, Petroleum Engineer
U.S. Department of the Interior
Office of Indian Energy and Economic Development
Division of Energy and Mineral Development
13922 Denver West Parkway, Ste. 200
Lakewood, CO 80401.3142
Phone: 303.969.5270 x333
Direct: 720.407.0613
Cell: 303.241.0185
Email: roger.knight@bia.gov

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SCOTT NICHOLS – Speaker

From 1986 to 2005 Scott Nichols worked at the Idaho Department of Lands, advancing from the position of state Minerals Mined Land Reclamationist to the Bureau Chief for Surface and Mineral Resources. As the Bureau Chief, Nichols guided the Department's development of mineral and renewable energy programs, along with directing management of rangeland resources and state navigable waters. From 2005 to 2008 Mr. Nichols worked for a national consulting firm building a successful regional environmental practice. In 2008 Scott joined U.S. Geothermal (USG) as the company's Environmental, Regulatory and Lands Manager. During his work with USG, he has been responsible for all permitting and regulatory activities ranging from local building permitting, state and federal drilling permits and the preparation of NEPA analyses for the Department of Interior and Department of Energy. Nichols has a degree in Watershed Management & Hydrology from Colorado State University.

Scott H. Nichols
Permitting and Lands Manager
U.S. Geothermal Inc.
390 E. Park Center Blvd, Suite 250,
Boise, ID 83706
Phone: 208.424.1027
Cell: 208.401.6459 Email: snichols@usgeothermal.com
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RANDY PETERSON – Speaker

Randal B. Peterson is the Manager of Corporate Permitting for Ormat Technologies, based in Reno, Nevada. Peterson manages Ormat's U.S. permitting and regulatory compliance programs. He and his team serve as Ormat's liaison to regulatory agencies and local stakeholders. Since joining Ormat in 2007, Randy has served in operations management and business development, in addition to his current permitting role. Of his 37-year career in power generation, over 25 years of experience have been in renewable power development, permitting, operation, and regulatory compliance. He holds Bachelors and Masters of Business Administration degrees.

Randy Peterson
Manager of Corporate Permitting
Ormat Technologies
6225 Neil Road, Reno, NV 89511
Phone: 775-356-9029
Email: rpeterson@ormat.com
Website: ormat.com
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SUSAN PETTY – Speaker

Susan Petty is the chief technology officer, president, and co-founder of AltaRock Energy, Inc. With more than 30 years of experience in the geothermal industry, Petty's work has included all aspects of testing, evaluation, analysis, modeling and optimization of geothermal wells, wellfields and power plants. Susan has also negotiated geothermal lease agreements, power sales agreements, geothermal project financing agreements and geothermal property sales and purchases, and completed policy studies for state and federal agencies. She has driven geothermal electrical generation projects in locations around the world, including: California, Nevada, Indonesia, the Philippines and Central America. In addition to her extensive experience in the private sector, Petty has worked with the Department of Energy on policy studies on the

economic modeling of geothermal pricing, and the impact of technology improvement on the cost of geothermal power. Susan has been instrumental in developing information, planning and designing software for use in developing public policy in geothermal energy. Susan holds a B.A. from Princeton University in Geology, and an M.S. in Groundwater Hydrology from the University of Hawaii.

Susan Petty
President and Chief Technology Officer
AltaRock Energy, Inc.
4010 Stone Way North, Suite 400
Seattle, WA 98103
Phone: 206-729-2400
Email: spetty@altarockenergy.com
Website: www.altarockenergy.com

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WYNDY RAUSENBERGER – Speaker

Wyndy Rausenberger has worked in the Office of the Solicitor, U.S. Department of the Interior Division of Mineral Resources, for 14 years, and at the U.S. Department of Justice in the Environmental and Natural Resource Division before that, from 1996 to 2000. Rausenberger has advised BLM on oil and gas issues, especially NEPA and land use planning, and was involved in litigation about Powder River Basin coalbed methane, as well as helping to establish legal precedent supporting staged NEPA, ESA and NHPA compliance. She has been assigned to support the BLM geothermal program full time since 2006, but also moonlighted for the Bureau of Ocean Energy Management to work on NEPA and legal defense of decisions related to the first offshore wind leasing and project proposal, Cape Wind, between 2006 and 2013. Wyndy aided BLM in drafting its new (2007) geothermal regulations implementing the Energy Policy Act of 2005, and also was involved in developing the Geothermal Programmatic EIS and Plan Amendments for the western states. She got her JD and a Master's degree in Environmental Law in 1992 from Vermont Law School, and her undergraduate degree was in Psychology from the University of California at San Diego in 1989.

Wyndy Rausenberger
Attorney-Advisor
U.S. Dept. of the Interior, Office of the Solicitor,
Division of Mineral Resources
Branch of Onshore Mining and Reclamation
1849 C Street, NW MS 5358, Washington, DC 20240
Office: 202.208.5360
Cell: 301.237.7325
Email: wyndy.rausenberger@sol.doi.gov

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ANDREW E. SABIN - Speaker

Dr. Sabin is currently the geothermal SME/Sr. Geologist for the Navy's Geothermal Program Office (GPO). He was Director of the GPO from 2008-2013. He first came to GPO as a graduate student in 1991 and after an 11 year absence, returned as GPO's Deputy Director in 2007. GPO is responsible for oversight of the Coso geothermal field, the 3rd largest geothermal field in North America. With revenue generated from the sale of electricity at Coso, GPO also conducts geothermal exploration with the goal of identifying and developing geothermal power on DOD bases world-wide. In his capacity with GPO as well as in previous

employment, Andy has worked in Peru, Guam, Japan, and SE Asia as well as Alaska, Hawaii and throughout the continental U.S. Andy earned a BS in Geology from the U. Maryland, an MSc. in Geology from the U. Pittsburgh and a PhD in Economic Geology (ore deposits and exploration) from the Colorado School of Mines. He is a Registered Geologist and is currently on the Board of Directors for the Geothermal Resources Council.

Andrew E. Sabin, Ph.D., P.G.
Geothermal Program Office
429 E. Bowen Road, Mail Stop 4011
China Lake, CA 93555
Phone: 760.939.4061
Office: 760.939.2700
Cell: 760.384.8840
Email: andrew.sabin@navy.mil

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TINA ANDERHOLT SHIELDS, P.E. - Speaker

Tina Shields is the Colorado River Resources Manager for the Imperial Irrigation District in southern California. Shields represents the district's water interests at local, state and federal levels – protecting its annual 3.1 million acre-feet allocation of Colorado River water. Shields has directed the district in a wide range of issues related to water rights, supply and demand planning, resource management, water quality, regulatory compliance and water conservation. Her responsibilities include development of regional and IID's water resources management plans and policy crucial to IID's agricultural water users, while ensuring that residential, commercial and industrial demands are met, including those forecasted for the emerging local renewable energy industry. Shields graduated from California State Polytechnic University, Pomona, with a BS degree in Civil Engineering and has completed coursework toward a Masters in Public Administration at San Diego State University. She is licensed State of California Professional Civil Engineer and Land Surveyor-in-Training. Shields was recognized as a Water Education Foundation Water Leader in 2001.

Tina Anderholt Shields, PE
Colorado River Resources Manager
Imperial Irrigation District
333 E. Barioni Blvd.
Imperial, CA 92251
Phone: 760.339.9038
Email: tshields@IID.com

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VINCENT J. SIGNOROTTI - Speaker

Vince Signorotti is Vice President, Resource and Real Estate Assets for EnergySource LLC. Prior to joining EnergySource in September 2011, he was employed by Terra-Gen Power LLC, CalEnergy Operating Corporation, Magma Power Company and Union Oil Company of California. Vince has worked in the energy business for over 33 years with the majority of that time spent in the renewable energy sector, primarily geothermal energy development. In his current capacity he is responsible for the acquisition and maintenance of land, leases and the real estate components for the John L. Featherstone Plant and other geothermal and solar projects, which are located near the Salton Sea in Imperial County, California. He is also involved in legislative affairs and regulatory issues associated with geothermal energy development.

He has served on numerous committees involved in crafting and promoting responsible energy policy, economic development and regulatory process. In addition, he has testified on numerous occasions before local, state and federal officials.

Vince Signorotti
Vice President, Resource and Real Estate Assets
EnergySource LLC
321 S. Waterman Ave, Suite 200
El Centro, CA 92243
Phone: 760.312.8000
Email: vsignorotti@energysource.us.com
Website: <http://www.energysource.us.com/>

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STEVE STORO – Speaker

Steve Storo is a staff geologist and Geothermal Projects Manager with the Bureau of Land Management at the Oregon State Office. Steve is responsible for all activities relating to the exploration, leasing and development of geothermal resources on public lands. His BLM career spans 29 years, with positions in Alaska, New Mexico and Oregon. Storo holds a B.S. in Geology from University of Alaska, a Master’s Degree in Hazardous Waste Management from Wayne State University, and is a certified Oil and Gas Inspector for the federal government.

Steve Storo
Geologist/Geothermal Projects Manager
Bureau of Land Management, Oregon State Office
Phone: 541.416.6885
Email: sstoro@blm.gov

KEVIN TALKINGTON – Speaker:

Kevin Talkington is the Land Manager for Calpine Corporation where he maintains the Geysers and Glass Mountain geothermal leases and associated land agreements, as well as the easements and leases associated with the natural gas collection system for Calpine’s subsidiary “CPN Pipeline,” and also works with Calpine’s project origination group with finding and acquiring new sites for natural gas fired powered plants in the State of California. Kevin graduated from California State University at Chico in 1980 with a degree in Business and went right to work with Union Oil Company in its geothermal division in the Imperial Valley. He spent 5 years in the Imperial Valley after which he was transferred to the Geysers and has been there ever since.

Kevin Talkington
Land Manager
Calpine Corporation
Phone: 707.31.6191
Email: kevint@calpine.com
Website: Calpine.com

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AL WAIBEL - Speaker

Al Waibel is a Licensed Professional Geologist in Oregon and Washington with over 30 years of experience in geothermal exploration and development in North and Central America, Asia, Africa and Europe. Waibel is the founder and Chief Geologist of Columbia Geoscience. In addition to providing geothermal geological consulting services nationally and internationally, Al has developed and taught numerous courses on the interpretation of hydrothermal minerals, data collection and interpretation and on the application of well data for private industry and government agencies. He was also a member of the Citizens Committee that collaboratively created the Newberry National Volcanic Monument -- a process that resolved what had been controversial boundary issues. Waibel is the Technical Chairman of the 2014 Geothermal Resources Council (GRC) Annual Meeting and serves as President of the Pacific Northwest Section of GRC.

Al Waibel
Columbia Geoscience
22495 NW Quatama Road, Hillsboro, OR 97124
Phone: 503.640.9877
Cell: 503.260.7215
Email: awaibel@hevanet.com

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CHARLENE WARDLOW – Co-Chair and Speaker

Charlene Wardlow has worked in the geothermal industry for 30 years, primarily in environmental permitting and compliance and in developing new projects, mostly in California. Wardlow worked at The Geysers for 23 years before heading east to Reno to work for Ormat, where she serves as Director of Business Development. She is a long-time member of the Board of Directors of the Geothermal Resources Council (and recipient of GRC’s Special Achievement Award for her work in the geothermal industry) and has presented and published extensively on geothermal permitting and development issues. Charlene has a B.S. in geology and a M.S. in Petroleum Engineering from New Mexico Institute of Mining and Technology.

Charlene Wardlow
Director Business Development
Ormat Technologies, Inc.
6225 Neil Road
Reno, NV 89521
Phone: 775-336-0155
Email: cwardlow@ormat.com
Website: www.ormat.com