

Lemley 2007 Intermountain Conference on the Environment

Bringing Together Disciplines to Understand the Environment

Hosted by Idaho State University's
College of Engineering, College of Business; Departments of
Civil and Environmental Engineering, Nuclear Engineering,
Environmental Science and Management, Geosciences,
Biological Sciences, Chemistry, Physics, and the GIS Center,
Office of Research, Idaho Museum of Natural History, and
Facilities Services

Vitit Kantabutra photo

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**September 18-19, 2007
Idaho State University
Pocatello, ID**



**Lemley 2007 Intermountain Conference on the Environment
Schedule for Tuesday, September 18, 2007**

7:30 – 8:30	Registration and Continental Breakfast (Ballroom)	
8:30 – 8:40	OPENING SESSION (Ballroom) <i>Welcome by ISU President Arthur Vailas</i>	
8:40 – 9:00	A Tribute to Mother Earth and the Environment by <i>the Shoshone Bannock Tribe</i>	
9:00 – 9:05	Introduction of Jack Lemley by <i>Dean Richard Jacobsen</i>	
9:05 – 9:40	Keynote Speech by <i>Jack Lemley</i> (Lemley International, Inc.)	
9:40 – 10:20	Plenary tutorial “Stressed Out: Managing Meltdown in Watersheds of the Intermountain West” by <i>Colden Baxter</i> (Ballroom)	
10:20 – 10:30	BREAK	
	TECHNICAL SESSIONS - TRACK 1 (Wood River Room)	TECHNICAL SESSIONS - TRACK 2 (Little Wood River Room)
	Surface/Subsurface Water Quality & Stream Ecology - I	Energy & Alternative Fuels - I
10:30 – 10:55	“Demographic model predicts trout population response to selenium based on individual-level toxicity” by <i>Robert W. Van Kirk</i> and <i>Sheryl L. Hill</i> ; Department of Biological Sciences, Idaho State University, Pocatello, ID; Department of Mathematics, Idaho State University, Pocatello, ID	“Update on Commissioning of the Raft River Geothermal Power Plant” by <i>Kevin Kitz</i> , Vice President of Project Development, U.S. Geothermal Inc., and <i>Dan Bruner</i> , Senior Geologist, Cascade Earth Sciences
10:55 – 11:20	“The ‘fire pulse’: Effects of wildfire on aquatic-terrestrial connectivity in a wilderness watershed” by <i>Rachel L. Malison</i> and <i>Colden V. Baxter</i> ; Stream Ecology Center, Department of Biological Sciences, Idaho State University, Pocatello, ID	“Modeling future nuclear power plant development and its potential impact on carbon emissions” by <i>Akira Tokubiro</i> and <i>Samuel Brinton</i> ; University of Idaho, Idaho Falls, ID; Kansas State University, Manhattan, KS
11:20 – 11:45	“Persistently wet native community refuges in a hotter, drier, southern Idaho” by <i>Clifford C. Amundsen</i> , Volunteer for the Sawtooth National Forest, Twin Falls, ID	“Nuclear process heat transfer” by <i>Fred Gunnerson</i> and <i>Piyush Sabharwall</i> ; University of Idaho, Idaho Falls, ID
11:45 – 12:10	“Influence of sampling time and frequency on estimates of annual sediment loads: a multi-year study of a 5 th order river” by <i>R.S. Inouye</i> , <i>A. M. Ray</i> , <i>G. Mladenka</i> , and <i>M. Rowe</i> , Department of Biological Sciences, Idaho State University, Pocatello, ID; Idaho Department of Environmental Quality, Pocatello, ID	“Thermophysical properties for hydrogen economy” by <i>Richard Jacobsen</i> and <i>Jake Leachman</i> , College of Engineering, Idaho State University, Pocatello, ID; University of Wisconsin, Madison, WI
12:10 – 1:20	LUNCHEON (Ballroom) <i>Keynote Speaker: Dr. Harold McFarlane, Pres. of American Nuclear Society, 2006-2007</i> “Clean, affordable energy for 9 billion people: the nuclear energy wedge”	
1:20 – 2:00	Plenary tutorial “Clean Abundant Energy” by <i>Jay F. Kunze</i> (Ballroom)	
	Surface/Subsurface Water Quality & Stream Ecology - II	Energy & Alternative Fuels - II
2:00 – 2:25	<i>Invited paper:</i> “Current and emerging stewardship and water challenges in the Intermountain West” by <i>Robert Breckenridge</i> , Environmental Stewardship and Water Management, Idaho National Laboratory, Idaho Falls, ID	“Hybrid electric, plug-in hybrid electric, and hydrogen internal combustion engine vehicle testing activities and results” by <i>James Francfort</i> , Advanced Vehicle Testing Activity, Idaho National Laboratory, Idaho Falls, ID
2:25 – 2:50	“Tri-state water quality monitoring in the Bear River watershed: The First Year” by <i>Melissa Thompson</i> ; Idaho Department of Environmental Quality Pocatello Regional Office, Pocatello, ID	“Sustainable Harvest Index” by <i>Raymond R. Grosshans</i> , <i>Kevin M. Kostelnik</i> , and <i>Jacob J. Jacobson</i> , Idaho National Laboratory, Idaho Falls, ID
2:50 – 3:05	BREAK - Exhibits, Posters (Ballroom)	
3:05 – 3:30	“Our river – our choices: the Portneuf river and where we might go” by <i>John W. Sigler</i> , City of Pocatello, Pocatello, ID	“Fuel-grade ethanol for 10% gasoline additive” by <i>Jay F. Kunze</i> and <i>Jeffrey J. Paul</i> , College of Engineering, Idaho State University; Paul Farm Enterprises
3:30 – 3:55	“Model application in management of the Snake River Plain aquifer” by <i>Gary Johnson</i> and <i>Bryce Contor</i> , Idaho Water Resources Research Institute, University of Idaho, Idaho Falls, ID	“Generation of electricity and characterization of bacterial growth in a single-chamber microbial fuel cell” by <i>Chikashi Sato</i> , <i>Reymer G. Martínez</i> , <i>Larissa Quintana Sánchez</i> , <i>Malcolm S. Shields</i> , <i>Alba Pérez-Gracia</i> , <i>Marco P. Schoen</i> , and <i>Yoshiko Fujita</i> ; Idaho State University, Pocatello, ID; Idaho National Laboratory, Idaho Falls, ID
3:55 – 4:20	“Sources of nitrate contamination in ground water of the Pleasant Valley area, Power County, Idaho” by <i>John Welban</i> , <i>Neil Poulson</i> , and <i>Tom Hepworth</i> ; Idaho Geological Survey, Idaho State University, Pocatello, ID; Poulson Associates, American Falls, ID; Idaho Department of Environmental Quality, Pocatello, ID	“Underground nuclear parks –Are they practical, cost effective and safe?” by <i>James W. Mabarr</i> and <i>Jay Kunze</i> ; College of Engineering, Idaho State University; Department of Geosciences, Idaho State University, Pocatello, ID
4:20 –	Concurrent Activities: Pizza Social in the Heritage Room (arranged by students) Tour of the Idaho Museum of Natural History by <i>Kristin Fletcher</i> Tour of the Rendezvous Center by <i>Syed F. Hashim</i>	

**Lemley 2007 Intermountain Conference on the Environment
Schedule for Wednesday, September 19, 2007**

7:30 – 8:30	Registration and Continental Breakfast (Ballroom)	
8:30 – 9:10	Plenary tutorial “Toxins and Pathogens: Invisible Threats and Environmental Changes” by <i>Malcolm Shields</i> (Ballroom)	
	TECHNICAL SESSIONS - TRACK 1 (Wood River Room)	TECHNICAL SESSIONS - TRACK 2 (Little Wood River Room)
	Environmental & Public Health - I	Civil, Geotechnical Engineering Issues - “Green” Buildings
9:10 – 9:35	“E. coli O157 and non O157 in Idaho” by <i>Kathleen Spiegel</i> , Dept. of Biological Sciences, Idaho State University, Pocatello, ID	“Comparing ‘green’ versus traditional buildings using environmental life cycle cost assessment methodologies” by <i>Syed F. Hashim</i> , Facilities Services, Idaho State University, Pocatello, ID
9:35 – 10:00	“Prevalence and stability of shiga toxin genes in wild ungulates in Idaho” by <i>Jeremy Gilbreath</i> , Malcolm Shields, Larry Farrell, Peter Sheridan, and Kathleen Spiegel:: Department of Biological Sciences, College of Arts and Sciences, Idaho State University, Pocatello, ID	“Environmentally Friendly and Heat Efficient Structures” by <i>Habib Sadid</i> and Nanette South; Civil Engineering, College of Engineering, Idaho State University, Pocatello, ID
10:00 – 10:15	BREAK - Exhibits, Posters (Ballroom)	
10:15 – 10:40	“A new method for identifying shiga toxin-encoding phages in <i>E. coli</i>” by <i>Zhen Li</i> and Malcolm Shields; Department of Biological Sciences, College of Arts and Sciences, Idaho State University, Pocatello, ID	Civil, Geotechnical Engineering Issues -Land Management, Hillside Development
		“Landslide recognition in hillside development areas of Pocatello” by <i>Victor Godfrey</i> and James W. Mahar; Department of Civil and Environmental Engineering, College of Engineering, Idaho State University, Pocatello, ID; Department of Geosciences, Idaho State University, Pocatello, ID
10:40 – 11:05	“The role of ultraviolet light and ultrasound energy to disinfect water” by <i>Nabanita Modak</i> , Chikashi Sato, and Malcolm Shields; College of Engineering, Idaho State University, Pocatello, ID; College of Arts and Science, Idaho State University, Pocatello, ID	“Adopting land use regulations governing hillside development in Pocatello, Idaho” by <i>Michelle Pak</i> , AICP, Planning and Development Services Department, City of Pocatello, Idaho, ID
11:05 – 11:30	Environmental & Public Health - II	“Soil-cement check dams” by <i>Krystal Firebaugh</i> and Andrew Kimmel; The Land Group, Inc., Twin Falls, ID; Project Engineering Consultants, Ltd., Nampa, ID
	“Formaldehyde in indoor air” by <i>Marita Poulson</i> and Jay Kunze, College of Engineering, Idaho State University, Pocatello, ID	
11:30 – 11:55	“Asthma slide rule: Managing a child’s respiratory health during air pollution episodes” by <i>Conrad Colby</i> and Uwe Reischl; Boise State University, Boise, ID	“On-Site Sediment and Erosion Control Projects in Hillside Area” by <i>J. Mitchell Greer</i> , Jun Yao, and Joel Dixon, RMES, Pocatello, ID
12:00 – 1:00	LUNCHEON (Ballroom) Awards Ceremony by <i>Syed Hashim and Jay Kunze</i>	
1:00 – 1:30	“Waste treatment and disposal in a desert community” by Chad Hyslop, US Ecology-Idaho, ID	
1:30 – 2:10	Plenary tutorial “GIS/GPS” by <i>Keith Weber</i> (Ballroom)	
2:10 – 2:35	“Cytotoxicity of silicon dioxide nanoparticles: Relevance to environmental health” by <i>James C.K. Lai</i> , Maria B. Lai, Alok Bhushan, Sirisha Jandhyam, Kristina L. Edgley, Christopher K. Daniels, and Solomon W. Leung; Dept. of Biomedical and Pharmaceutical Sciences, College of Pharmacy and Biomedical Research Institute; Dept. of Civil and Environmental Engineering, Idaho State University, Pocatello, ID	Environmental Tools and Issues
		“Stable isotopic tracers in environmental studies” by <i>E. B. Neischmid</i> , S. H. Vegors, Jr., and Larry S. Christensen, College of Engineering, Idaho State University, Pocatello, ID; Laser Isotope Separation Lab, Idaho State University, Idaho Falls, ID
2:35 – 3:00	“Identification of Pathogenic E. coli Genes in Sewage Influent and Effluent in Southeastern Idaho Wastewater Treatment Plants” by <i>A. Heather Fitzpatrick</i> and Malcolm Shields; Department of Microbiology, Idaho State University, ID	“Errors in Cheatgrass classification using Quickbird Imagery” by <i>Bhushan Gokbale</i> and Keith Weber, GIS Training and Research Center, Idaho State University, Pocatello, ID
3:00 – 3:15	BREAK - Exhibits, Posters (Ballroom)	
3:15 – 3:40	“Radiation accident response: Preparation and simulation experience at Portneuf Medical Center” by <i>Jing Wang</i> , David Theel, Mike Callaghan; Radiation Safety Committee, Portneuf Medical Center, Pocatello, ID	“Teton dam revisited” by <i>James W. Mahar</i> , Dept. of Civil and Environmental Engineering; Dept of Geosciences, Idaho State University, Pocatello, ID
3:40 – 4:05	“Radiation health effects related to applications in modern society” by <i>Jay F. Kunze</i> and Jing Wang; Idaho State University, Portneuf Medical Center, Pocatello, ID	“Changes in underground storage tank (UST) regulations in Idaho” by <i>Scott Owen</i> , Idaho Department of Environmental Quality, Pocatello, ID
4:10 – 4:35	“The Future of the Environment and Resources of the Intermountain West” by <i>Scott Hughes</i>	

Current as of September 13, 2007

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We greatly appreciate the support received from the following co-hosts for our 2005 conference:

- Arts Manufacture and Supply (AMS)
- Cascade Earth Sciences
- Idaho National Laboratory (INL)
- ISU GIS Department
- ISU Maintenance and Operations
- ISU Office of Research
- Jay Kunze
- Rocky Mountain Engineering
- Stoler ESER Program
- YSI Environmental

The following high school students were sponsored to attend the 2005 conference:

- Cassie Benson
- Rachel Brackenbridge
- Amanda Davis
- Kelcie Dickerson
- Hannah Harris
- Kris Hornsby
- Nishant Johnson
- Chester Kenner
- Matt Ottaway
- Elise Smith