Technical Excellence Update

2014 Calendar Year
(sorted alphabetically by publication title)

I am pleased to present the Technical Excellence Update for the 2014 calendar year, which showcases the public domain publications and presentations available through SRC. This version is sorted alphabetically by the publication title.

SRC continues to be an innovative research and development organization with a focus on the mining and minerals and energy sectors and the environmental considerations that are important across both. Our employees have a wide range of experience and scientific expertise, enabling SRC to meet unique and varied client needs. SRC technical specialties include, but are not limited to:

Natural Sciences
biology, chemistry, computing science, geology, math, physics, etc.

Engineering
chemical, civil, industrial, mechanical, metallurgical, petroleum, etc.

Management Sciences
business administration, business disruption/resumption management, commerce, facilities management, information technology, marketing and communications, law, risk management, safety, etc.

Visit our website at www.src.sk.ca for additional calendar year updates.

Laurier L. Schramm
President and CEO
September 2015


A Primer on Innovation in Canada, Presentation, 5th Innoventures Canada (I-CAN) Innovation School, Toronto, ON; Saskatchewan Research Council, Saskatoon, SK, Schramm, L.L., R. Cornell and J. Smith, 2014

A Survey of Polymer Flooding in Western Canada, Conference Presentation, Society of Petroleum Engineers (SPE) Improved Oil Recovery Symposium, Tulsa, OK, SPE-169062-MS, http://dx.doi.org/10.2118/169062-MS, Renouf, G., April 12-16, 2014

Abandoned Mines Remediated by Project Cleans, Interview, Saskatoon Star Phoenix; Regina Leader Post, Wilson, I. and D. Allen, May 24, 2014


Adaptation to Climate Change and Potash Mining in Saskatchewan: Case Study for the Qu’Appelle River Watershed, Invited Presentation, Saskatchewan Environmental Industry and Managers Association (SEIMA), Regina and Saskatoon, SK, 19 slides, Pittman, J., T. Pearce, J. Ford, V. Wittrock and E. Wheaton, March 17-18, 2014, SRC Publication: 13749-2D14


Agriculture and Patterns of Climate Extremes on the Canadian Prairies, Invited Presentation, Saskatchewan Soil Conservation Association Conference, University of Saskatchewan, Saskatoon, SK, 29 slides, Wheaton, E., January 16, 2014

An Overview of Climate Change Impacts on Saskatchewan’s Forests, Presentation, University of Saskatchewan Gender and Climate Change Adaptive Capacity Workshop, Saskatoon, SK; Forestry Boot Camp, Prince Albert, SK, Johnston, M., 2014

Application of Molecular Markers Beyond Breeding, Newsletter Article, American Association of Cereal Chemists Biotechnology Division Newsletter, Ganeshan, P., October 2014


Biodigester, Interview, Global News Saskatchewan, Taman-Atmher, E., April 2014

Boreal Forest, Interview, CJWW Radio Saskatchewan; Missiniipi Broadcasting Corporation (MBC) Radio, Johnston, M., January 2014


Can Innovation be Measured?, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/innovation/can-innovation-measured/, Schramm, L.L., June 3, 2014

Canada’s Natural Resources in a Changing Climate, Webinar Presentation, Natural Resources Chapter of the Canadian National Climate Change Assessment Update, Saskatoon, SK, Johnston, M., October 16, 2014


Changing Climates (IPCC AR5) and Implications for the Canadian Prairies, Invited Presentation, School of Environment and Sustainability, University of Saskatchewan, Saskatoon, SK, 41 slides, Zwiers, F. and E. Wheaton, February 14, 2014

Characterization of Past Drought and Excessive Moisture Extremes Using the Standardized Precipitation and Evapotranspiration Index: Case Studies of the Oldman River and Swift Current Creek Watersheds, Technical Report, Prepared for the Vulnerability and Adaptation to Climate Extremes in the Americas Project (VACEA), Prairie Adaptation Research Collaborative, Regina, SK, Saskatchewan Research Council (SRC), Saskatoon, SK, 41 pp, Wittrock, V., E. Wheaton, B. Bonsal and J. Vanstone, July 2014, SRC Publication: 13224-3F13

Chemical Reaction Mechanisms That Govern Oxidation Rates During In-Site Combustion and High-Pressure Air Injection, Conference Paper, Society of Petroleum Engineers (SPE) Heavy Oil Conference, Calgary, AB; DOI: 10.2118/170162-MS; Doc ID: SPE-170162-MS, Freitag, N., June 10-12, 2014
CHOPS: But Not For Your BBQ, SRC Internet Blog and Interview, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/energy/chops-bbq/; Regina Leader Post, Crabtree, M., January 20, 2014


Clean-Up Projects a Tidy Fit for Northern Partners, Interview, Eagle Feather News, Colette, M., April 2014

Climate Change and the Western Boreal Forest: An Emerging Synthesis, Workshop Facilitator and Presentation, Climate Change and Forest Policy Change Workshop, Saskatchewan Environment Forest Service, Prince Albert, SK, Johnston, M., December 9-11, 2014

Climate Change Impacts And Adaptation In The Canadian Forest Sector, Conference Paper, International Union of Forestry Research Organizations 2014 World Congress, Salt Lake City, UT, Johnston, M., September 2014

Climate Reference Station, Conservation Learning Center, Annual Summary 2013, Technical Report, Saskatchewan Research Council (SRC), Saskatoon, SK, 26 pp, Dunn, S., C. Beaulieu and V. Wittrock, March 2014, SRC Publication: 13000-1E14

Climate Reference Station, Saskatoon, Annual Summary 2013, Technical Report, Saskatchewan Research Council (SRC), Saskatoon, SK, 48 pp, Beaulieu, C. and V. Wittrock, February 2014, SRC Publication: 10440-1E14


Comments on the Guidebook: Pathways to Climate Change Resilience, Invited Presentation, International Forum Linking Gender, Adaptation, Climate Change and Forestry/Resource Management in Canada, School of Environment and Sustainability, University of Saskatchewan, Saskatoon, SK, 8 slides, Wheaton, E., May 27-29, 2014


Connecting Climate and Crop Yields: Case Studies of the Swift Current Creek and Oldman River Watersheds, Technical Report, Prepared for the Vulnerability and Adaptation to Climate Extremes in the Americas Project (VACEA), Prairie Adaptation Research Collaborative, Regina, SK; Saskatchewan Research Council (SRC), Saskatoon, SK, 33 pp, Wittrock, V., E Wheaton, B. Bonsal and J. Vanstone, October 2014, SRC Publication: 13224-2E13

Cowesess Wind Energy Storage Project a Sign of Things to Come, Interview, Green Energy Futures Media, Jansen, R., December 2014

Crop Yields and Climate Connections: Swift Current Creek and Oldman River Watersheds, Canada, Presentation, Prepared for Vulnerability and Adaptation to Climate Extremes in the Americas Project (VACEA), Prairie Adaptation Research Collaborative, Regina, SK; Saskatchewan Research Council (SRC), Saskatoon, SK, 23 slides, Wittrock, V., E Wheaton, B. Bonsal and J. Vanstone, October 2014, SRC Publication: 13224-3D14

CRS Weather Summaries, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/environment/crs-weather-summaries/, Wittrock, V., November 28, 2014


Determination of Concentration Dependent Solvent Dispersion in Hybrid Enhanced Oil Recovery Processes, Presentation, Stats and Controls Meeting, Montreal, QC, Imran, M., May 22-23, 2014


Development of a Plant Toxicity Test Using Species Native to the Canadian Boreal Wetlands, Conference Presentation, 41st Aquatic Toxicity Workshop 2014 Ottawa, ON, Moody, M., 2014

Diamond Lab, Interview, Global News Saskatoon, McCubbing, M., January 2014


Drought and Excessive Moisture Conditions. An Examination of the Last 110 Years. Case Study of the Oldman River and Swift Current Creek Watersheds, Presentation, Prepared for Vulnerability and Adaptation to Climate Extremes in the Americas Project (VACEA), Prairie Adaptation Research Collaborative, Regina, SK; Saskatchewan Research Council (SRC), Saskatoon, SK, 27 slides, Wittrock, V., E Wheaton, B. Bonsal and J. Vanstone, June 2014, SRC Publication: 13224-2014
Dust Storms of the Canadian Prairies: A Dustier and Muddier Outlook, Invited Presentation, National Drought Mitigation Centre, Lincoln, NE; University of Saskatchewan, Saskatoon, SK, 26 slides, *Wheaton, E. and V. Wittrock*, April 1-4, 2014, SRC Publication: 13749-1D14


Food Security and Climate Change: Canadian Prairie Agriculture, Invited Presentation, Canada World Youth, Saskatoon, SK; University of Saskatchewan, Saskatoon, SK, 26 slides, *Wheaton, E.*, October 8, 2014


Game-Changing Saskatchewan Inventions, Interview, CTV News, *Farber, A.*, November 2014


Impacts of Climate Change on Caribou Habitat, Webinar Presentation, Science Committee of the Canadian Boreal Forest Agreement, Saskatoon, SK, *Johnston, M.*, June 26, 2014


LCA of Co-firing Willow with Coal for Electricity Generation in Saskatchewan, Presentation, Canadian Society of Bioengineering, Saskatoon, SK, Sanscartier, D., K. Van Rees, B. Amichev, B. Campbell and K. Woytiuk, July 8-10, 2014


Lorado, Interview, Saskatchewan Mining Journal; Missinipi Broadcasting Corporation (MBC) Radio, Allen, D., 2014


Oil and Gas Industry Tackles Responsible Water Usage, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/energy/oil-gas-industry-tackles-responsible-water-usage/, Crabtree, M., September 24, 2014

Optimization of Polymer Flooding for Heavy Oil EOR, Conference Presentation, 35th International Energy Agency - Enhanced Oil Recovery (IEA EOR) Symposium, Beijing, China, Nakutnyy, P., October 15-17, 2014

Optimized Surfactant–Polymer Flooding Technologies, Presentation, Purdue University, Lafayette, IN, Luo, P., May 1, 2014

Optimum Voidage Replacement Ratio and Operational Practice for Heavy Oil Waterfloods, Conference Paper, Society of Petroleum Engineers (SPE) Heavy Oil Conference, Calgary, AB; DOI: http://dx.doi.org/10.2118/170099-MS; Doc ID: SPE-170099-MS, Brice, B., S. Ning, A. Wood and G. Renouf, June 10-12, 2014

Past and Future Extreme Climate Events in the Canadian Prairies: Integrating Economics and Climate, Presentation, Earth Sciences and Climate Change Conference, San Francisco, CA; University of Saskatchewan, Saskatoon, SK, 35 slides, Kulshreshtha, S. and E. Wheaton, July 28, 2014

Past Climate Trends and Future Projections: Impacts on Agriculture in the Canadian Prairies, Invited Presentation, Canadian Entomology Society, Saskatchewan, SK; University of Saskatchewan, Saskatoon, SK, 25 slides, Wheaton, E., September 29, 2014


Physical and Numerical Modeling of Capillarity and Aqueous Phase Saturation Effects on the Rate of Solvent Mass Transfer in Boundary Layer in Heavy Oil Reservoirs, Conference Paper, Society of Petroleum Engineers (SPE) Heavy Oil Conference, Calgary, AB; DOI: http://dx.doi.org/10.2118/170012-MS; Doc ID: SPE-170012-MS, Ahmadloo, K., A. Ashgari, A. Henri and N. Freitag, June 10-12, 2014

Pipe Flow Technology Centre, Editorial, Oil and Gas Product News, McGilp, L., August 2014


Post-Chops, Editorial, Oil and Gas Product News, Crabtree, M., August 2014

Post-CHOPS EOR Methods – The Role of Wormholes, Presentation, Petroleum Technology Alliance Canada, Calgary, AB, Knorr, K.D. and M. Imran, December 11, 2014

Productivity Increase for Bakken Wells Under Development by SRC, Interview, Oil & Gas News, Crabtree, M., October 2014

Project CLEANS, Interview, Canadian Press; Opportunity North Magazine, Wilson, L., 2014


Rare Earth Expertise in Canada and SRC’s Mineral Processing Pilot Plant, Interview, Resource Clips Social Network and News Site, Schreiner, B., July 2014

Remediating Abandoned Mine and Mill Sites in Northern Saskatchewan, Interview, Regina Leader Post, Wilson, I. and M. Calette, May 24, 2014

Remember the Biodigester, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/energy/remember-biodigester/, Nyifra, W., April 28, 2014

Research Offers Solutions for Oil and Mining Slurry Pipeline Challenges, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/mining/research-offers-solutions-oil-mining-slurry-pipeline-challenges/, McGlip, L., August 6, 2014

Revealing Saskatchewan’s True Diamond Potential, Editorial, Northern Prospector Magazine, Creighton, S., August 2014

Right Place, Right Time, Special Report, Journal Contribution and Interview, Alberta Oil Magazine, Veerabhadrappa, S., April 2014

Risks to the Energy Sector Related to Extreme Climate Events: Case Studies of Adaptation Actions focusing on the Upper and Lower Souris River Watersheds, Canada, Invited Presentation, Energy Working Group Webinar, National Resources of Canada; Saskatchewan Research Council (SRC), Saskatoon, SK, 18 slides, Wittrock, V., J. Parry and E. Wheaton, October 15, 2014, SRC Publication: 13757-1D14

Saskatchewan – Canada’s Sunniest Province, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/environment/saskatchewan-canadas-sunniest-province/, Wittrock, V., November 26, 2014

Saskatchewan Research Council Rare Earth Minerals in Saskatchewan and the World, Interview, Regina Leader Post; Saskatoon Star Phoenix, Murray, C., May 24, 2014

Saskatchewan’s Industry Adapting to our Changing Climate, Invited Presentation, Saskatchewan Ministry of Environment, Regina, SK; Saskatchewan Research Council, Saskatoon (SRC), SK, 49 slides, Wittrock, V., J. Pittman and E. Wheaton, March 13, 2014, SRC Publication: 13687-1D14

Saskatchewan’s Industry Adapting to Our Changing Climate: Case Study of Qu’Appelle River Watershed and the Potash Industry, Invited Presentation, Saskatchewan Climate Change Adaptation Meeting, Wittrock, V., J. Pittman and E. Wheaton, 2014

Saskatchewan’s Energy Frontman a Familiar Face, Interview, Calgary Herald, Paynter, P., April 2014

SaskPower Forest Carbon Project: Update 2014 Presentation, Saskatchewan Environment Assistant Deputy Ministers (ADMs), Regina, SK, Johnston, M., November 13, 2014


Seedhawk, Interview, CTV Yorkton, Wismer, M., January 2014


Smoothing Out Wind’s Volatility, Interview, Saskatoon Star Phoenix, Jansen, R., April 2014


SRC Biodigester Unveiled in Ottawa, Interview, Saskatoon Star Phoenix, Taman-Athmer, E., April 15, 2014


SRC Unveils Innovative Biodigester, Interview, Metro News Saskatoon and Regina, Taman-Athmer, E., August 2014

SRC’s Economic Impact, Interview, Global TV Saskatoon, Schramm, L.L., December 2014

Sustainability Appraisal of Revegetation Options for Mine Remediation in Northern Canada, Conference Presentation, RemTech 2014 Banff, AB, Petelina, E., October 2014


The Evolving Climate of the Qu’Appelle River Watershed, Invited Presentation, Using a Nuclear Reactor as a Remediation Tool, Wittrock, V., E. Wheaton and J. Pittman, July 15, 2014, SRC Publication: 10439-1D14

The Pathway from Discovery to Invention to Innovation, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/innovation/pathway-discovery-invention-innovation/, Schramm, L.L., September 3, 2014

The Sparkle of Saskatchewan’s Diamonds, Editorial, Business & Industry South Saskatchewan, Volume 3, Issue 3, McCubbing, M. and R. Gotto, Fall 2014


The Use of the LANDIS Forest Ecosystem Model in Projecting Impacts of Climate Change on the Boreal Forest, Lecturer and Lab Sessions, Renewable Resource Management 321 on Climate Change Modeling at U of S, Saskatoon, SK, Johnston, M., November 24, 2014

The VACEA Project: Modelling Climate Impacts on Agro-Ecosystems, Invited Presentation, International Research Initiative on Adaptation to Climate Change (IRIACC) Panel, Congress of the Humanities and Social Sciences, Canadian Association of Geographers Congress, Brock University, St. Catharines, ON, 28 slides, Kienzle, S., E. Wheaton, B. Bonsal, V. Wittrock and E. Barrow, May 24-30, 2014, SRC Publication: 13224-4D14


Using a Nuclear Reactor as a Remediation Tool, Poster, Property Institute of Canada Federal Contaminated Sites National Workshop, Ottawa, ON, Stanek, B., J. Zimmer, D. Chorney and M. Wismer, 2014

Weather and Climate. The Good, the Bad and the WOW...What Was That?!?!?, Invited Presentation, Northeast Branch of the Saskatchewan Institute of Agrologists Annual General Meeting, Carrot River, SK; Saskatchewan Research Council (SRC), Saskatoon, SK, 41 slides, Wittrock, V., April 2, 2014, SRC Publication: 11228-1D14

What are Waves of Innovation?, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/innovation/waves-innovation/, Schramm, L.L., October 15, 2014

Who are Canada’s Research and Technology Organizations?, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/innovation/canadas-research-technology-organizations/, Schramm, L.L., March 27, 2014

Why Do RTOs Need Public Support?, SRC Internet Blog, “From the Lab to the Loading Dock”; http://blog.src.sk.ca/innovation/rtos-need-public-support/, Schramm, L.L., February 6, 2014

Wind Energy Storage Technology Demonstration, Conference Presentation, GoGreen Symposium, Regina, SK, Jansen, R., February 26, 2014

Wind Storage, Interview, CJWW Radio Saskatoon, Jansen, R., 2014

Windspeakers, Interview, The Professional Edge, Issue 149, Jansen, R., March/April 2014