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2013 University of Oklahoma International WaTER Conference Program

Sunday, September 22

6:00 – 9:00 pm **Registration available and oral presentation submission** [Additional registration times: Monday, 7 am – 2 pm; Tuesday, 7 am – 10 am]

7:15 – 9:00 pm **Opening General Reception – meet, greet, eat and repeat!**

Monday, September 23

7:00 am – 2:00 pm **Registration available and presentation submission**

7:00 – 8:00 am **Buffet Breakfast in Cafeteria** (complimentary for NCED Hotel guests only)

8:30 – 9:00 am *Room M*

Welcoming Remarks: David Sabatini and Jim F. Chamberlain, Conference Co-Chairs

Welcome to the University of Oklahoma International WaTER Conference and Water Prize Award Ceremony: Thomas L. Landers, Dean, OU College of Engineering; Daniel Pullin, Dean, Price College of Business

9:00 – 9:40 am **Keynote 1: Adaptation to changing water demand and climates in Sub-Saharan Africa: the role of groundwater:** Richard Taylor, University College London

9:40 – 10:20 am **Keynote 2: WASH and Social Entrepreneurship Keynote:** Tamara Baker, iDE

10:20 – 10:50 am **Break**

ROOM G/H

Session 1: Capacity-Building: In-Country Partnerships

10:50 – 11:10 am

Sustainable development extension model empowers communities to achieve sustainable self-sufficiency
Forbes (SuDeX – USA)

11:10 – 11:30 am

Implementation of biosand filters in northwest Honduras: experiences of the Oklahoma State University student chapter of Engineers Without Borders
Wilber (Oklahoma State University)

11:30 – 11:50 am

Application of "asset-based" development methodologies to water projects
Butler (Engineers In Action)

ROOM I

Session 2: WASH Innovation and Design

Feasibility and sustainability of advanced membrane filtration devices for improved water quality in health centers in Rwanda
Driebelbis (University of Oklahoma)

Willingness to pay for sanitary latrines and the impact of financing on latrine sales - evidence from a cluster randomized trial in rural Cambodia
Baker (iDE Global WASH Initiative – Cambodia)

The Sol-Char Toilet: reinventing human waste management
Klees (University of Colorado Boulder)

ROOMS J/K

Session 3: Climate Change Impacts and Adaptation I

An assessment of reservoir filling policies and downstream impacts under a changing climate: Ethiopia's Grand Renaissance Dam
Zhang (Drexel University)

Using satellite data to improve the representation of spatial processes in regional land surface modeling over The Blue Nile Basin
Wu (University of Connecticut)

Sooners without borders: capacity building for flood prediction in Africa
Flamig (OU/ARRC & NOAA/NSSL – USA)

ROOMS L

Session 4: Assessment of WASH Interventions

Chlorine dispensers: establishing impact in emergencies
Lantagne (Tufts University)

State of water, sanitation and hygiene (WASH) program in public secondary schools in South-Western Nigeria: the way forward
Olukanni (Covenant University – Nigeria)

Studies on the role of WASH in livelihood security: challenges and opportunities in the case of Bora Woreda
Abaire (Catholic Relief Services – Ethiopia)

11:50 am – 1:00 pm **Lunch (Cafeteria)**

1:00 – 1:40 pm *Room M*

Keynote 3: Fluoride mitigation options: challenges and opportunities: Feleke Zewge, Addis Ababa University

1:40 – 2:20 pm **Keynote 4: Evidence-based behavior change for safe water consumption:** Hans Mosler, EAWAG

2:20 – 2:50 pm **Break**

Session 5: Capacity-Building: University-Based Programs

2:50 – 3:10 pm

Evolution of a potable water partnership in Omoa, Honduras
Campana (Oregon State University, Ann Campana Judge Foundation)

3:10 – 3:30 pm

Hydro-social cooperation through developing regional knowledge networks
Laituri (Colorado State University)

3:30 – 3:50 pm

The desert research institute's WASH capacity building efforts over the last 20 years in West Africa
Apambire (Desert Research Institute – USA)

3:50 – 4:10 pm

Capacity building: collaborative graduate program with Chulalongkorn University, Bangkok, Thailand
Sabatini (University of Oklahoma)

Session 6: Market-Based Approaches to WASH Challenges

Entrepreneurial tools for the developing world
Elliott (PATH – USA)

Decentralized water kiosks: developing models for sustainable and accessible delivery of safe water services in Rwanda
Brunson (University of Oklahoma)

The social marketing of household toilets among the Bai, Yunnan Province, China
Dickey (University of Oklahoma)

Market-based water, sanitation, & hygiene (WASH) approach
Norgbe (World Vision International – USA)

Session 7: Climate Change Impacts and Adaptation II

What is the potential for smallholder agricultural water management in Sub-Saharan Africa? An integrated hydrologic-economic assessment
You (IFPRI – USA)

Climate change impacts on rain-fed agriculture and crop yields in the Niger basin
Tarhule (University of Oklahoma)

Behavior adaptations to the climatic variability in the use of water for drinking and sanitation in the dry region of Sri Lanka
Bandaranayake (University of Sri Jayawardanapurap – Sri Lanka)

The impact of climate change adaptation efforts on water resources in Ethiopia
Asmare (World Vision International/East Africa Region)

Session 8: Gender and Social Equity

Water Isn't just for drinking: how water, sanitation and hygiene conditions affect girls' use of menstrual cups & sanitary pads in primary school in Kenya
Alexander (Liverpool School of Tropical Medicine)

Women, water and sanitation: vulnerabilities in the field
Warner (Millennium Water Alliance)

I couldn't urinate at our toilet … there's no water… I might see blood on the bowl: a formative investigation of menstruation and school WASH in four countries
Caruso (Emory University)

Fluoride contamination in the Bongo District of Ghana, West Africa: geochemical and cultural complexities
Alfredo (University of Texas)

4:10 – 5:20 pm **Poster Session/Social**

5:50 pm **Buses depart NCED for OU**

Banquet Dinner and 2013 University of Oklahoma International Water Prize Presentation
(Sam Noble Oklahoma Museum of Natural History)

6:30 – 6:40 pm **Welcome Comments:** David Sabatini and Jim F. Chamberlain, Conference Co-Chairs

6:40 – 6:55 pm **Native American Dance:** University of Oklahoma College of Fine Arts

6:55 – 7:35 pm **Dinner served**

7:35 – 7:45 pm **Sponsors / Prize Process:** Randall Kolar, OU WaTER Center

7:45 – 7:55 pm **Prize Award and Presentation:** Suzette Grillot, Dean of the College of International Studies

7:55 – 8:35 pm **Water Prize Plenary Lecture: Integrating WASH into development: insights and perspectives:** Ada Oko-Williams

8:35 – 8:40 pm **Closing Comments:** David Sabatini, Director of the OU WaTER Center

8:40 – 9:15 pm **Museum open for banquet attendees** (Buses to NCED will leave on staggered schedule)

Synergy at the Interface:
Integrating Technology, Social Entrepreneurship and Behavior Change

2013 OU International WaTER Conference Sponsors

WaTER Water Technologies for Emerging Regions – Water & Sanitation for all

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2013 University of Oklahoma International WaTER Conference Program

Tuesday, September 24

7:00 – 10:00 am

Registration available and oral presentation submission

Buffet Breakfast in Cafeteria (complimentary for NCED Hotel guests only)

	ROOM G/H	*ROOM I*	*ROOMS J/K*	*ROOMS L*
	Session 9: Fluoride Effects and Mitigation I	**Session 10: Water Resources and Supply**	**Session 11: Groundwater Resources and Well-Drilling Challenges I**	**Session 12: Lessons Learned in Urban WASH**
9:00 – 9:20 am	**Dental fluorosis and the extended health effects in children: guidelines for rectification and improving the well-being of children** Susheela (Fluorosis Foundation of India)	**Estimating water storage in Northern Ghana** Lutz (Desert Research Institute - USA)	**An approach using portable rock drills for water wells in remote areas on mountains** Cherry (University of Guelph)	**The SaniPath study: the consequences of a broken sanitation chain in four low-income urban settings i**n Accra, Ghana Moe (Emory University)
9:20 – 9:40 am	**The health effects of fluorosis in the Ethiopian Rift Valley** Kroeger (University of Oklahoma)	M**ultiple uses of water (MUS) bring economic benefits to villagers in Southern Zambia** Guzha (East Africa WASH Learning Center, World Vision International)	**Sustainable household groundwater supply: building upon five decades of experience in Eastern Madagascar** MacCarthy (University of South Florida)	**Provision of sanitation to more people in fast growing cities by application of decentralized wastewater management approach – lessons learnt from Vietnam** Nguyen (Institute of Environmental Science and Engineering - Vietnam)
9:40 – 10:00 am	**The impact of fluorosis on education in the Ethiopian Rift Valley: the case of Wonji/Shoa area** Paulos (Ethiopian Ministry of Science and Technology)	**Rainwater harvesting first-flush research and implementation of results in Sierra Leone** Lay (Oklahoma State University)	**The use of basic geophysical surveys to map potential drinking water supplies in developing countries** Mundell (Mundell & Associates - USA)	**Implementation of water safety plan for a piped-water supply system in India** Nijhawan (NEERI - India)
10:00 – 10:30 am	**Break**			
	Session 13: Fluoride Effects and Mitigation II	**Session 14: POU Drinking Water Treatment**	**Session 15: Groundwater Resources and Well-Drilling Challenges II**	**Session 16: Collaborations, Schools, and Voluntary Associations**
10:30 – 10:50 am	**Defluoridation using bone char in the Ethiopian Rift Valley** Mengesha (Oromo Self Help Organization - Ethiopia)	**Ceramic water filters for rural China: research results and resulting filter pot redesign** Chitwood (Partners in Hope - China)	**Building low cost local well drilling capacity in Senegal** Naugle (EnterpriseWorks/RI - USA)	**The A3U strategy, for ensuring that communities have access to safe water for consumption** Jayakaran (MAP International - USA)
10:50 – 11:10 am	**Optimizing filtration materials for fluoride removal from drinking water** Brunson (University of Oklahoma)	**Influence of iron and groundwater contamination on residual chlorine of water treated with sodium dichloroisocyanurate (NaDCC) tablets** Naser (icddr,b - Bengladesh)	**Components & cost benefit analysis of properly constructed wells** Schneider (National Ground Water Research & Educational Fdn - USA)	**Collaborative learning for collaborative impact in the millennium water alliance** Davis (Improve International)
11:10 – 11:30 am	**Community level solar energy based electrolytic defluoridation plant installations by CSIR-NEERI in India** Labhasetwar (NEERI - India)	**Evaluation of microbial contamination in drinking water during chemical intervention of geogenic contaminant removal in India** John (NEERI - India)	**The challenges of water well drilling in Niger West Africa** Stam (Hosanna Institute of the Sahel - USA)	**The neglected path, denied reality, retarded progress, and a missing link** Alaci (IBB University - Nigeria)
11:30 am – 12:45 pm	**Lunch (Cafeteria)**			
12:45 – 1:25 pm	*Room M*	**Keynote 5: Treatment wetlands for water and sanitation provision and improving people's livelihoods in remote areas of Uganda:** Frank Kansiime, Makerere University (Uganda)		
1:25 – 2:10 pm		**Panel: Climate Change and Water: Challenges across Sectors:** Invited Panel		
2:10 – 2:40 pm	**Break**			
	Session 17: Fluoride Effects and Mitigation III	**Session 18: Water Quality Improvement – Global Applications**	**Session 19: Groundwater Resources and Well-Drilling Challenges III**	**Session 20: Behavior Change in WASH**
2:40 – 3:00 pm	**Optimization of bone char technology for fluoride removal in drinking water:Fluoride removal by Co-precipitation with Calcium and Phosphate using bone char as a media/ catalyst for the precipitation. "A case study of Nakuru technology (Pellets)"** Wanjiku (Nakuru Defluoridation Company - Kenya)	**Potters For Peace: scaling up as the gatekeeper** Chartrand (U.S. Director Potters for Peace)	**Sustainability happens?** Cotner (Water4 - USA)	**A multi-component toolkit for effective integration of relevant NTD control activities into current WASH programs** Freeman (Emory University)
3:00 – 3:20 pm	**Montmorillonite K 10: a scavenger for fluoride from aqueous solution** Kagne (NEERI - India)	**Hand pump attachable iron removal plant for field implication in rural areas** Gwala (NEERI - India)	**Contribution of low cost appropriate drilling technology for improved access to safe water at inaccessible places** Lambisso (WASH Program Director in World Vision Ethiopia)	**Water and sanitation in integrated population-health-environment interventions: a case study from Ethiopia** Winch (Johns Hopkins Bloomberg School of Public Health)
3:20 – 3:40 pm	**Arsenic and fluoride mitigation - the US experience** Sabatini (University of Oklahoma)	**Intercultural bridges for sustainable projects: experiences of rural development projects in Bolivia** Cabero Ugalde (Engineers in Action)	**Hydrogeologists Without Borders: integrating groundwater with international development** Campana (Oregon State University)	**Designing a handWASHing station for low-income communities in Bangladesh using the integrated behavioural model for water, sanitation and hygiene interventions (IBM-WASH)** Hulland (The Johns Hopkins Bloomberg School of Public Health)
3:40 – 4:10 pm	**Break**			
	Session 21: Arsenic Effects and Mitigation	**Session 22: Socioeconomic Context: Affordability and Social Equity**	**Session 23: Ecological Engineering and Natural Treatment Systems**	**Session 24: Educational Approaches to Behavior Change**
4:10 – 4:30 am	**Arsenate adsorption onto iron amended rubber tree, Havea Brasiliensis, sawdust char and activated carbon** Ryckman (University of Oklahoma)	Wat**er challenges and solutions: Canada's first nations** Yanoshita (CORIX Utilities - USA)	**Socio-economic factors affecting the adoption of ecological sanitation approach in Benin** Kpangon (Water and Sanitation for Africa - Benin)	**What factors affect sustained adoption of clean water and sanitation technologies? A systematic review** Dreibelbis (University of Oklahoma)
4:30 – 4:50 pm	**Water supply options in arsenic-affected regions of Cambodia: targeting the bottom billion** Chamberlain (University of Oklahoma)	**Impact of socioeconomic factors and technology features onhousehold water supply choices in Uganda and the associated environmental consequences** Prouty (University of South Florida)	**Onsite wastewater natural treatment and effluent reuse system at the Omnilife Soccer Stadium in Guadalajara, Mexico** Garrido (Biohabitats - USA)	**Effective behavior change starts with the user journey** Baker (iDE Global WASH Initiative - Cambodia)
4:50 – 5:10 pm	**Arsenic removal by elecrocoagulation-a socially sustainable water treatment technology** Jadhav (North Maharashtra University - India)	**The contingent valuation method : pricing of water and sewerage services in Metro Manila** Campos (University of the Philippines Open University)	**The effect of influent organic content on biosand filtration efficiency and construction** Lam (Oklahoma State University)	**Integrating the edutainment social approach in hygiene and fluorosis mitigation behavioral change: a case study of Mirera-Karagita in Naivasha, Kenya** Mwengi (Community Development - Kenya)
5:10 – 5:40 pm	**K-12 Poster Contest Awards Ceremony and Conference Closing**			

Wednesday, September 25

9:00 am – 12:00 pm

Workshop #1 – Field Methods (Fears Structural Engineering Laboratory, south campus)

Rotary and percussion water well-drilling technologies (John Stam, Independent Consultant); **Biosand filter design and construction** (Greg Wilber, Oklahoma State University); **Ecolatrine design and construction** (Rebecca Ward, Engineers in Action); **Manual Well-Drilling** (Chris Cotner, Water4 Foundation); **Household POU Treatment** (OU students)

8:00 am – 12:00 pm

Workshop #2 – Social Entrepreneurship (CCEW Office, south campus)

Social entrepreneurship panel and actitivies: "Sustainability through Social Entrepreneurship" (Lowell Busenitz, University of Oklahoma; Dillon Carroll, CCEW; Samantha Toth, CCEW)