NEW HIRES

- Christian Dunkerly
  - Hourly Staff Research Scientist (Justin Huntington – NNSC)

- Christopher Garner
  - Assistant Research Scientist (Dave Decker – NNSC)

- Emily Kaminski
  - Hourly Technical (Markus Berli – SNSC)

- Dr. Dani Or
  - Affiliate Research Professor (Markus Berli – SNSC)

NEW PROJECTS

WV WATER QUALITY ANALYSES - FY17

PI: Alex Lutz
AGENCY: World Vision Inc
AMOUNT: $50,000
SUMMARY: Water Quality Analyses and Reporting: Contractor will analyze well water samples from World Vision’s Projects for trace elements, fluoride and rare earth elements, as stipulated by the World Health Organization and as directed by World Vision staff.
NEW PROJECTS

FATE AND TRANSPORT MODELING OF THE SOUTH Y PCE GROUNDWATER CONTAMINATION PLUME - TASK ORDER 4

PI: Greg Pohll  
Agency: South Tahoe Public Utility District  
Amount: $60,000  
Summary: Kennedy Jenks Consultants (KJC) is assisting the South Tahoe Public Utility District (STPUD) in a feasibility study of remedial alternatives to remove PCE groundwater contamination in the South Y Area. STPUD would like to use the groundwater flow model developed by DRI in the assessment remedial alternatives. This proposal outlines the tasks required to add a fate and transport model to the existing groundwater model framework. In addition, DRI would simulate a variety of remediation activities to aid the engineering alternative analysis. In other words, the model would be used to help optimize the design of the remediation system.

EL NINO PLAYA INUNDATION STUDY

PI: Julie Miller  
Agency: AERO Institute  
Amount: $31,388  
Summary: The playa inundation modeling effort is intended to confirm and calibrate a method for estimating the depth of playa (dry lake bed) inundation resulting from precipitation within the contributing watershed (French et al., 2005). Lakebed inundation depth sensors were installed on Rogers Lake during 2012, and data from these sensors collected during the El Nino winter period of 2015-2016 will be used in this study. In addition, precipitation records at Armstrong FRC/Edwards AFB will be reviewed to identify precipitation events that exceeded the depth of precipitation required to produce runoff during the winter period of 2015-2016 (El Nino winter). From these storms, Landsat images will be searched to identify visible images of Rogers Lake (playa). Those events that were both associated with significant precipitation recorded at the Edwards AFB precipitation gage, and for which the time interval between visible images of the dry lake bed and inundated lake bed was minimal, will be selected for possible evaluation. Landsat imagery will be selected as the fundamental data set for determining the extent of playa inundation resulting from these El Nino storm events. Analyzing the inundation depicted in the Landsat image in conjunction with high-quality ground elevation data within the context of a geographic information system (GIS) provides the means to quantify both the area of inundation and the associated volume of water.
PUBLISHED JOURNAL PAPERS


BOOK CHAPTERS


CONFERENCE PRESENTATIONS


**REPORTS**


**TALK**

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<td>Erick Bandala Gonzalez</td>
<td>Inactivation of Prymnesium parvum algae and degradation of related toxins in water from inland lakes</td>
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<td>25-Oct-2016</td>
<td>Joe McConnell</td>
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<td>06-Dec-2016</td>
<td>Jenny Chapman</td>
<td>NNSA/DOE Technical Research Engineering and Development Services (TREDS)</td>
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<td>12-Dec-2016</td>
<td>Braimah Apambire CoPI: Alan Heyvaert</td>
<td>Harmful Algal Bloom and Cyanotoxin Testing for Ghana</td>
<td>Water Directorate Ministry of Water Resources, Works and Housing</td>
<td>$125,426</td>
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The second cohort of 25 students has commenced study as part of the WASH Capacity Building Program. Face-to-face instruction is being held in Tamale, Northern Ghana in early February. Instructors include Braimah Apambire, Erick Bandala and two DRI WASH consultants.

CIWAS hosted a weeklong capacity building workshop in Liberia on water quality monitoring capacity building in October. The objective of the workshop was to support the government in developing the country’s water quality standards and establish baseline water quality parameters. Over 35 people participated, including key staff from government ministries as well as private and public stakeholders from locations across the country.

Braimah and DRI/UNR master’s student Zachary Arno conducted field research in five counties in Liberia in October. Working with staff from the Ministry of Health, Zach sampled and completed field tests on water from approximately 50 wells. Chemical, physical and bacteriological testing of samples is now underway. Results will be critical to help the Liberian government establish an initial understanding of chemical and bacteriological constituents in the nation’s groundwater.

CIWAS has successfully secured funding for a post-construction evaluation project of Rotary-funded WASH systems in Honduras. In partnership with WASRAG, the Rotary Club of Reno, and the Honduran Association of Water System Administrators (AHJASA), and with funding from Rotary Districts in Honduras, this project, which will assess the of functionality of Rotary-sponsored water systems across Honduras. To date Rotary has built over 90 water systems in Honduras, representing a total investment of approximately $5 million USD but the functionality of these systems post-construction remains largely unknown. CIWAS has developed an assessment tool and pilot project for 40 systems to help determine the current functionality rates. Project implementation will commence this spring. Following the evaluation DRI will provide recommendations to local water and Rotary Clubs that will help increase water system sustainability. CIWAS Program Manager Victoria Cuellar visited Honduras in October to meet with Honduran Rotarians and AHJASA representatives and discuss logistics for the study.

CIWAS is collaborating with TOHL and the municipality of Río Hurtado in Chile to establish a post-construction support program for existing small water systems in the municipality. CIWAS is providing the municipality of Río Hurtado and TOHL with guidance and technical assistance in designing a Circuit Rider program specifically tailored to Río Hurtado’s needs and as well a Monitoring and Evaluation (M&E) framework to assess impact. CIWAS’ Program Manager Victoria Cuéllar traveled to Chile in November to support the newly hired Circuit Rider in meetings with water committees throughout the municipality and to further develop the project. Meetings were also held at La Serena University with Cazalac - the Regional Water Center for Arid and Semi-Arid Zones in Latin America and the Caribbean- to discuss the potential of participating in CIWAS’ WASH Capacity Building Program.