



# Jeffrey C. Davids

ASSISTANT PROFESSOR | CIVIL ENGINEERING AND COLLEGE OF AGRICULTURE | CALIFORNIA STATE UNIVERSITY, CHICO

400 W. First St., Chico, CA 95929

☎ (+1) 530.898.3167 | ✉ jcdavids@csuchico.edu | 📱 jeffdavids

“Be the change that you want to see in the world. Now!”

## Education

### Delft University of Technology

PH.D. IN CIVIL ENGINEERING, WATER MANAGEMENT

- Dissertation on SmartPhones4Water: Young Researchers + Citizen Scientists + Mobile Technology.
- Managed team of 10 Nepali researchers and supervised 20 B.Sc. and M.Sc. students from the Netherlands and the US.

*Delft, Netherlands*

*Aug. 2015 - Jun. 2019*

### California State University, Chico

M.Sc. IN GEOSCIENCES, OPTION IN HYDROLOGY/HYDROGEOLOGY

- Graduation with distinction.
- Thesis on the spatial and temporal analysis of stream restoration efforts in depleted aquifer systems.

*Chico, CA, USA*

*Jan. 2008 - May. 2011*

### California Polytechnic State University, San Luis Obispo

B.Sc. IN GENERAL ENGINEERING, CONCENTRATION IN WATER RESOURCES

- Senior project on slow sand filtration and solar disinfection water treatment technologies.

*San Luis Obispo, CA, USA*

*Sep. 2000 - Jun. 2004*

## Summary

Jeff’s educational background, professional experience, and dedication to developing human resources from diverse backgrounds demonstrate his commitment to the co-equal goals of (1) providing the food and fiber the world needs while (2) sustainably managing the Earth’s limited natural resources. This passion plays itself out through education, research, community engagement, and appropriate application of technology. Jeff is an Assistant Professor with CSU Chico, Founder and President of SmartPhones4Water and H2oTech, guest researcher at Delft University of Technology (TU Delft), a Water Resources Consultant for the Food and Agriculture Organization of the United Nations (UN-FAO), and a Water Resources Engineer with Davids Engineering. As a Water Resources Consultant to the UN-FAO, Jeff is tasked with the design and implementation of a series of training packages on Water Accounting and Water Productivity in Afghanistan and Myanmar. Jeff is a licensed Professional Engineer in the State of California and has a Ph.D. in Civil Engineering (Water Management) from Delft University of Technology, an M.Sc. from California State University Chico in Geosciences and Hydrogeology, and a B.Sc. in General Engineering from California State University San Luis Obispo.

Jeff’s interests focus on how sustainable management of water, energy, and food are supported by education, integrated systems thinking, innovative sources of data, modeling tools, social engagement, and outreach. From 2015 to 2019, together with SmartPhones4Water and TU Delft, he investigated how young researchers, citizen science, mobile technologies, and remote sensing can be leveraged to develop foundational hydrologic datasets in data scarce regions. Prior to moving to Nepal in 2015, Jeff provided professional engineering services to a variety of clients in the Western United States and abroad for over 10 years. He successfully launched various entrepreneurial endeavors, including the RemoteTracker (2011) - an innovative new flow measurement device currently in use on over 150,000 acres of farm land in the Western US; SmartPhones4Water (2013) - a non-profit organization; FLOW (2015) - an online water data portal; and S4W-Nepal (2017) - a Nepal based non-profit research organization. Jeff has utilized various technologies to accurately quantify water flows in a variety of settings including natural streams and rivers, open-channel agricultural conveyance systems, and pipelines over a broad range of materials and sizes. Jeff has extensive experience performing hydrologic and hydrogeologic field measurements used to characterize groundwater and surface water quantity and quality. Jeff has managed diverse international teams and large projects, including the design, installation, calibration, and maintenance of several large flow measurement and data acquisition networks in the US and abroad.

## Summary of Skills

<b>Teaching</b>	Water Resources, Irrigation, Environmental Monitoring, GIS and Remote Sensing, Data Science
<b>Software</b>	MS Office Suite, Quantum GIS (QGIS), Open Data Kit (ODK), ODK Aggregate, Python, Google Cloud, ArcGIS
<b>Data Science</b>	Python, Pandas, Matplotlib, SciPy, NumPy, GDAL, SQL
<b>Languages</b>	English (native), Nepali (intermediate), Spanish (basic), Thai (basic)
<b>SCADA</b>	Human Machine Interface (HMI) development, Programmable Logic Controllers (PLCs), systems integration
<b>Water Accounting</b>	Hydrology, field data collection, data management, remote sensing, GIS, Python raster analysis
<b>Environmental Monitoring</b>	Hydroacoustics, water quantity and quality, telemetry, data loggers, MODBUS, SDI-12, 4-20 mA

## Teaching Experience

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### California State University, Chico

*Chico, California, USA*

ASSISTANT PROFESSOR, WATER RESOURCES AND AGRICULTURAL ENGINEERING

*Aug. 2019 - PRESENT*

- Courses taught:
  - AGET 340 - GPS and GIS in Agriculture and Natural Resource Management;
  - AGET 360 - Irrigation;
  - CIVL 321 - Fluid Mechanics Laboratory;
  - CIVL 461 - Water Resources Engineering; and
  - CIVL 561 - Hydrology and Open Channel Hydraulics.
- Involving students (CIVL 461 and CIVL 561) in SmartPhones4Water citizen science project through performing, analyzing, and interpreting precipitation measurements at their respective places of residence.
- Development of new curricula and activities for spatial hydrology to incorporate into CIVL 461 and CIVL 561.
- Continued research on the applications of innovative technologies and citizen science in water resources management and agriculture.
- Co-management of U.S. Bureau of Reclamation (USBR) grant (\$250,000 per year) at the Agricultural Training and Research Center (ATRC) at the California State University, Chico Farm.
- Management of Agricultural Research Institute (ARI) grant on measuring soil and plant stress from the ground up (\$65,000 per year).

### Food and Agriculture Organization of the United Nations (UN-FAO)

*Kabul, Afghanistan; Dubai, UAE; Nay*

*Pyi Taw, Myanmar*

WATER RESOURCES CONSULTANT

*May. 2017 - PRESENT*

- Served as lead author for the development of comprehensive curricula for water accounting training including packages on: the water cycle; water balances; environmental data acquisition; spatial and temporal domains; fluxes and changes in storage; geographical information systems (GIS); remote sensing (RS); hydrological modeling; green, blue, and grey water; crop physiology and transpiration processes; crop yields; consumptive vs. non-consumptive water uses; water productivity; climate change; Water Accounting Plus (WA+); interpretation of WA+ fact sheets; UN sustainable development goals; and development of appropriate water sector intervention packages.
- Led diverse teaching team of international specialists from the Netherlands, Nepal, Thailand, UK, Afghanistan, the US, and the UAE for implementation of first six training packages for 30 water resources specialists from three different Afghan water related ministries.
- Designed and initiated training water accounting training program for Myanmar water managers and researchers.
- Provided training on remote sensing and citizen science for water management to water managers and policy makers in the Near East and North Africa (NENA) region.

### China Institute of Water Resources and Hydropower Research (IWHR) and the UN-FAO

*Beijing, China*

WATER RESOURCES EXPERT

*Oct. 2019*

- Participated in expert consultation to produce technical and policy guidelines for consumption-based water management. Consumption-based water management has been pioneered in China in Turpan (semi-arid Xinjiang) and in the water-stressed Hai River Basin, encompassing extensive groundwater use and well-documented over-abstraction in the North China Plain.
- Presented examples of ongoing water accounting work in Afghanistan, Myanmar, and Nepal involving citizen science and remote sensing.
- Led multiple review sessions during the expert consultation.

### Rotterdam University of Applied Sciences - Hogeschool

*Rotterdam, Netherlands*

WATER RESOURCES CONSULTANT, WATER MANAGEMENT

*Jan. 2019 - Jul. 2019*

- Developed standardized data collection protocols using XLSForm, ODK Collect, and ODK Aggregate.
- Provided capacity building training for the Water Management team and students to develop protocols and access data.
- Facilitated Smartphone Data Collection Training in collaboration with Delft University of Technology and SmartPhones4Water, including development of training materials and curriculum, and implementation of the event and instruction.

### California State University, Chico

*Chico, California, USA*

LECTURER, CIVIL ENGINEERING DEPARTMENT

*Jan. 2011 - May. 2015*

- Taught three sections of Fluid Mechanics (CIVL 321) labs for a total of 10 semesters.
- Developed and exposed students to real-world examples for Fluid Mechanics lab course.
- Scored Good to Excellent marks on four peer review classroom evaluations.
- Scored an average 4.55 out of 5 for overall indicators from a total of nine student evaluations from 131 individual students.

## Professional Development

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### U.S. Bureau of Reclamation (USBR) Irrigation Training Facility

*Chico, California, USA*

CO-PRINCIPAL INVESTIGATOR

*Aug. 2019 - Present*

- Managed budget of roughly \$250,000 for 2019-2020.
- Led team of B.Sc. and M.Sc. students on applied research related to irrigation evaluation and flow measurement.
- Performed irrigation evaluations on drip and micro (sprinkler and spray).

## **Measuring What Matters: Sensing Soil Moisture and Crop Stress From The Ground Up, Agricultural Research Institute (ARI)**

*Chico, California, USA*

PRINCIPAL INVESTIGATOR

*Proposal Awarded in Jun. 2020*

- Developed project concept, assembled project team, and wrote proposal.

## **Agricultural Research Institute (ARI) Startup Mini-Proposal**

*Chico, California, USA*

PRINCIPAL INVESTIGATOR

*Jun. 2020 - Sep. 2020*

- Developed project concept and wrote proposal.
- Procured project equipment and materials.
- Prepared final project report.

## **Nepali Groundwater Resources Development Board**

*Kathmandu, Nepal*

WATER RESOURCES CONSULTANT

*Mar. 2016 - Oct. 2016*

- Developed mobile technology platform with Open Data Kit (ODK) Collect and Aggregate for distributed hydrogeologic data collection with Android smartphones.
- Performed historical analysis of collected groundwater level data from Groundwater Resources Development Board.
- Provided training in Nepali language to office and field staff for the use, quality control, and management of data collected with mobile collection platform.
- Created schema for Nepal groundwater information system.

## **SmartPhones4Water (S4W)**

*Chico, California, USA*

FOUNDER AND PRESIDENT

*Sep. 2013 - Present*

- Founded SmartPhones4Water (S4W), and California based 501(c)(3) non-profit organization in September of 2013.
- Developed and refined S4W's mission to leverage the power of young researchers, mobile technology, and citizen science to improve lives by strengthening our understanding and management of water.
- Led fund raising and outreach efforts for funding S4W's first pilot project in Nepal (S4W-Nepal)
- Led development of mobile technology platform for citizen science based data collection based on Open Data Kit (ODK) Collect, ODK Aggregate running on the Google Cloud, and a custom Python web application for viewing, quality controlling, and disseminating information.

## **Losing Big Chico Creek and Discharge Measurements with Smartphones**

*Butte County, California, USA*

STUDENT SUPERVISOR AND MENTOR (CHICO STEM CONNECTIONS COLLABORATIVE (CSC2))

*May 2020 - Present*

- Supervised two student researchers.
- Facilitated sharing of findings with Butte County and other interested stakeholders.
- Obtained funding to continue measurements on the Losing Big Chico Creek project.
- Training students on use of QGIS and Python for managing and visualizing geospatial data.

## **Western Canal Water District, Sutter Mutual Water Company, and Reclamation District No. 108 Summer 2020 Projects**

*Yolo, Sutter, Colusa, and Butte Counties, California, USA*

CONSULTANT (DAVIDS ENGINEERING)

*May 2020 - Sep. 2020*

- Managed three CSU, Chico summer interns.
- Led efforts to map Sutter Mutual Water Company's water distribution infrastructure and development of RemoteTracker configuration files.
- Managed development of custom flow ratings for lateral heading undershot gates.

## **Swedish Research Links Grant**

*Kathmandu, Nepal*

CO-PRINCIPAL INVESTIGATOR

*Jan. 2017 - 2019*

- Wrote application for and successfully acquired grant funding for research project titled "Jump-starting Nepal's Citizen Science Based Monitoring and Management of Water Resources."
- Co-Managed project budget of roughly \$155,000
- Led development of core research topics and related publications including one publication that is fully completed, two under review, and one to be submitted in the spring of 2019.
- Provided capacity building, training, leadership, and oversight to activities in Nepal including team members from Nepal, Netherlands, Sweden, Canada, and the US.
- Planned and facilitated two symposiums on "Citizen Science for Sustainable Mountain Development" as part of the Kathmandu Institute of Applied Sciences "Mountains in a Changing World" conferences.

## **SmartPhones4Water-Nepal (S4W-Nepal)**

*Kathmandu, Nepal*

CO-FOUNDER

*Aug. 2015 - Present*

- Moved to Kathmandu Nepal to lead the design and launch of S4W's first pilot project called S4W-Nepal.
- Learned Nepali language and culture to assemble project team and partners.
- Developed professional network and partnerships with the Himalayan Biodiversity and Climate Center (HimBioCliC), Nepal; Kathmandu Institute of Applied Sciences (KIAS), Nepal; Delft University of Technology, Netherlands; the Swedish International Development Agency (SIDA), Sweden; and Institute of Engineering (IOE), Tribhuvan University, Nepal.
- Assembled and trained S4W-Nepal's core staff team of 10 Nepali scientists and engineers, who in turn are engaged with over 50 young researchers and over 300 citizen scientists.

## RemoteTracker

Chico, California, USA

LEAD DEVELOPER (H2OTECH)

Oct. 2011 - Present

- Invented concept of portable, GPS enabled, wireless acoustic Doppler velocimeter (WADV) for farm-gate flow measurement.
- Assembled and managed development team for RemoteTracker related software and hardware components.
- Led outreach, marketing, and piloting efforts leading to wide scale implementation on over 150,000 acres of farm land in Northern California within Reclamation District No. 108, Richvale Irrigation District, Biggs-West Gridley Water District, Western Canal Water District, Natomas Central Mutual Water Company, Glenn-Colusa Irrigation District, Provident Irrigation District, and Princeton Codora Glenn Irrigation District.
- Applied for patent with the US Patent Office 13/542,490.

## Yuba Water Agency | Measurement Improvement Plan Development and Implementation

Yuba County, California, USA

CONSULTANT (DAVIDS ENGINEERING)

Mar. 2011 - Aug. 2015

- Led development of Measurement Improvement Plan (MIP) to improve customer delivery measurement and quantification of key boundary inflows and outflows.
- Inventoried and inspected existing open channel and pipe flow measurement sites, in addition to development of designs and cost estimates for improvements required to ensure that YCWA is compliant with the Agricultural Water Measurement Regulation (CCR §597).
- Implemented various technologies including acoustic Doppler velocimeters, acoustic Doppler profilers, and stage-discharge curves for compliance.

## Hydraulics Control | IJmuiden Sluice Gate Flow Measurement Improvements

IJmuiden, Netherlands

CONSULTANT (DAVIDS ENGINEERING)

Aug. 2013 - Sep. 2013

- Analyzed existing flow measurement and data management practices at the IJmuiden Sluice Gates on the North Sea and Amsterdam-Rhine Canals, which are the main water supply and drainage facilities for a significant portion of The Netherlands surrounding the greater Amsterdam area.
- Developed data collection plan to improve the accuracy of flow measurements through the seven sluice gates.
- Recommended use of advanced hydroacoustic methods to qualitatively detect reversed flow (i.e. from the North Sea into the Canal), and to quantitatively determine flow rates through the sluice structures as compared to the Venturi methods currently being utilized.

## Shasta Valley Resource Conservation District | Stream-Aquifer Data Collection Plan

Siskiyou County, California, USA

CONSULTANT (DAVIDS ENGINEERING)

Sep. 2012 - May. 2013

- Performed and summarized literature review of (1) previous studies on the Shasta Valley and (2) sustainable groundwater management.
- Developed stream-aquifer data collection plan for the Shasta Valley, a hydrogeologically complex and poorly understood intermontane groundwater basin in Northern California.
- Identified and prioritized tasks in support of the Shasta Valley Resource Conservation District's (SVRCD) goal of developing foundational knowledge of the basin's groundwater system and the nature of its interaction with surface water bodies.

## Joint Water District Board | SCADA System Development and Implementation

Butte and Sutter Counties,  
California, USA

CONSULTANT (DAVIDS ENGINEERING)

Sep. 2011 - Jun. 2015

- Designed a Supervisory Control and Data Acquisition (SCADA) system for the Joint Water District Board, an agricultural water provider to four irrigation and water districts served by the Thermalito Afterbay.
- Programmed MODBUS remote terminal unit (RTU) communication protocols between a central ClearSCADA server and the remote sites using cellular communication.
- Upgraded RTU hardware and peripherals (e.g. solar power supplies) and performed velocity index ratings for acoustic Doppler velocimeter sites.
- Designed and programmed user friendly human machine interface (HMI) for interacting with real-time and time-series historical data.

## Turlock Irrigation District | Customer Delivery Measurement Plan

Stanislaus County, California, USA

CONSULTANT (DAVIDS ENGINEERING)

Feb. 2012 - Aug. 2015

- Developed and implemented Customer Delivery Measurement Plan (Plan) to ensure compliance with the Agricultural Water Measurement Regulation (CCR §597).
- Reviewed and refined spot flow measurement protocols for performing current metering measurements of farm-gate flows.
- Led the development of customized procedures for gate/parcel specific ratings, in addition to the field testing of acoustic Doppler velocimeters.

## South San Joaquin Irrigation District | Flow Measurement Plan

San Joaquin County, California, USA

CONSULTANT (DAVIDS ENGINEERING)

May. 2011 - Aug. 2015

- Identified the goals of the South San Joaquin Irrigation District's (SSJID's) Flow Measurement Plan (Plan): (1) to provide cost-effective service to customers; (2) generate improved operational records for planning and analysis, and; (3) comply with the Agricultural Water Measurement Regulation (CCR §597).
- Designed a range of flow measurement methodologies and site improvements for SSJID involving standard critical depth structures (e.g. flumes and weirs) and acoustic Doppler flow measurement devices.
- Performed extensive field testing of acoustic Doppler velocimeters, magnetic meters, and meter-gate to evaluate accuracy relative to CCR §597 accuracy requirements.

## **Reclamation District No. 108, Richvale Irrigation District, and Biggs-West Gridley Water District | Turnout Flow Measurement Improvements**

*Colusa, Butte, and Sutter Counties,  
California, USA*

CONSULTANT (H2OTECH AND DAVIDS ENGINEERING)

*May. 2009 - Present*

- Evaluated alternative measurement methods that are potentially capable of achieving heightening regulatory standards, including: existing orifice gates, weirs set in precast boxes, and the RemoteTracker, a recently introduced portable acoustic Doppler flow measurement device.
- Designed pilot program including (1) customization of the portable measurement device for District needs, (2) selection and inventory of a test reach, (3) calibration of upstream and downstream measurement devices, (4) development of an automated data transfer process and (5) development of a Water Information System for billing and accounting.
- Provided training to district staff (operators and managers) for use and management of the selected alternative, the RemoteTracker system.
- Supported district-wide implementation of the RemoteTracker system at over 1000 delivery points (including all three districts) including infrastructure improvements, and hardware and software refinements.
- Developed customized Water Information System (WIS) and Water Accounting Database (WAD) to integrate flow measurement data into management and billing processes.
- Evaluated historical water application depths, rate structures, and water sales to provide guidance for development and adoption of new water rate structures based in part on the volume of water delivered.
- Provided ongoing support of all portions of the RemoteTracker system.

## **AquaTerra Consulting | Montague Weir Flow Measurement and Fish Passage Alternatives**

*Siskiyou County, California, USA*

CONSULTANT (DAVIDS ENGINEERING)

*Mar. 2011 - Dec. 2011*

- Assessed existing weir structure from fish passage and measurement perspectives.
- Developed alternatives for modification of the weir to satisfy the identified co-equal fish passage and flow measurement goals.
- Presented results to US Geological Survey, US Fish and Wildlife, Shasta Valley Resource Conservation District and others and worked with stakeholders to identify a preferred alternative.

## **City of San Diego | San Pasqual Groundwater Basin Monitoring Program Development**

*San Diego, California, USA*

CONSULTANT (DAVIDS ENGINEERING)

*Jan. 2012 - July. 2012*

- Identified data gaps for development of groundwater management plan for San Pasqual Groundwater Management Plan.
- Developed methodology for quantifying surface inflows and outflows to and from the groundwater basin to improve estimates of groundwater recharge occurring from overlying streams.

## **Glenn-Colusa Irrigation District | Drain Flow Measurement Improvements**

*Glenn and Colusa Counties,  
California, USA*

CONSULTANT (H2OTECH)

*Feb. 2008 - Oct. 2009*

- Designed flow measurement methodology and improvement plans for 12 drain flow measurement sites around the low gradient borders of Glenn-Colusa Irrigation District.
- Performed detailed hydraulic calculations necessary for the design of the various flow measurement structures.
- Supported installation of permanent Acoustic Doppler Velocimeters and velocity index calibrations with Acoustic Doppler Current Profiler measurements.

## **Western Canal Water District, Joint Water Districts Board, and California Department of Water Resources | Rice Water and Harvest Yield Monitoring**

*Butte and Sutter Counties,  
California, USA*

CONSULTANT (H2OTECH)

*May. 2007 - Oct. 2010*

- Collected, quality controlled, and transmitted necessary data to quantify the impacts of cold water on yields from individual rice fields.
- Installed, maintained, and managed data from 125 continuous monitoring sites measuring both water and air temperature.
- Developed required documentation and presented information to stakeholders.

## **Orland Unit Water Users' Association | Northside Canal Improvements**

*Glenn County, California, USA*

CONSULTANT (DAVIDS ENGINEERING)

*Feb. 2007 - Oct. 2013*

- Performed site surveys and designed improvements for a series of canal improvements and a 35 acre-foot regulating reservoir on Lateral 210 of the Orland Unit Water Users' Association.
- Prepared plans and specifications for associated improvements and regulating reservoir.
- Compared historical rating curves for a Parshall flume and sharp crested weir with spot flow measurements to validate accuracy of historical flow records used in designing the reservoir.
- Provided construction inspection and oversight services.

## **The Nature Conservancy | Shasta Valley Water Management Studies**

*Siskiyou County, California, USA*

CONSULTANT (DAVIDS ENGINEERING)

*May. 2006 - Nov. 2013*

- Conducted site visits including spot flow measurements in conveyance ditches, tested seepage rates in ditches, observed tailwater flows and drainage patterns.
- Installed transit-time and acoustic Doppler velocity flow meters for pump station and distribution system flow monitoring.
- Performed ponding seepage tests to quantify irrigation distribution seepage rates.
- Supported development of a final water balances technical report to guide the District's water conservation efforts.
- Created custom water information systems to manage and quality control data.

## **Petra Partners Co., Ltd | Water Supply Plans**

*Chiang Mai, Thailand*

CONSULTANT (H2OTECH)

*July. 2006 - Oct. 2006*

- Developed water supply plan for one of the company's biodiesel and coffee production facility in Mae Lai Village.
- Assessed coffee plantation's water demand.
- Quantified potential spring yields.
- Performed aquifer performance tests of supply wells.
- Developed conceptual designs for water storage and distribution system.

## **Wilsey Ham | Civil Design and Site Improvements**

*Chico, California, USA*

JUNIOR ENGINEER

*May. 2005 - Apr. 2006*

- Designed and prepared plans for various improvement projects using AutoCAD.
- Performed gravity pipeline and retention pond design in order to not alter post improvement site runoff generation.
- Developed grading, drainage, and roadway designs, plans, and specifications.

## **Service**

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### **Civil Engineering Department, California State University, Chico**

*Chico, California, USA*

FACULTY MEMBER (DEPARTMENT LEVEL SERVICE)

*Aug. 2019 - PRESENT*

- Active participant in departmental planning activities and tasks.
- Supervision and advising for students, including mentoring on personal interests and potential career opportunities.

### **ECC Strategic Planning Committee, College of Engineering, Computer Science and Construction Management, California State University, Chico**

*Chico, California, USA*

FACULTY MEMBER (COLLEGE LEVEL SERVICE)

*Sep. 2020 - PRESENT*

- Selected to participate in bi-weekly strategic planning meetings.
- Represent early-career faculty members.
- Develop strategy for expanding CSU, Chico's role in water management and agriculture in the North State and beyond.
- Note: the strategic planning committee has been postponed in light of the various challenges we are facing currently.

### **CSU Chico Campus Sustainability Committee's Research Subcommittee**

*Chico, California, USA*

FACULTY MEMBER (UNIVERSITY LEVEL SERVICE)

*Aug. 2019 - PRESENT*

- Active participant planning meetings, including definition of research sustainability.
- Coordinating efforts for promotion of open access publications and a centralized and inclusive research repository, including traditional research outputs (e.g. peer-reviewed publications), but also non-traditional outputs (e.g. art exhibits, documentaries, podcasts, etc.).

### **Big Chico Creek Water Tour - Center for Water and the Environment (CWE)**

*Big Chico Creek Watershed,  
California, USA*

FACULTY FACILITATOR (UNIVERSITY LEVEL SERVICE)

*Mar. 2020 - Apr. 2020*

- Recruited students from Civil Engineering and College of Agriculture.
- Planning student engagement activities focused on spatial hydrology, stream-aquifer interactions, and agricultural water use.

### **Young Researchers' Circle Nepal**

*Kathmandu, Nepal*

MENTOR (COMMUNITY LEVEL SERVICE)

*Feb. 2020 - PRESENT*

- Facilitate and participate in knowledge and capacity building training times with 30+ Nepali Young Researchers.
- Provide strategic planning supervision and support for curricula development.

### **SmartPhones4Water-Nepal**

*Kathmandu, Nepal*

CO-FOUNDER (COMMUNITY LEVEL SERVICE)

*Aug. 2017 - PRESENT*

- Mentor team of five young researchers in research methods, writing, presentation, and technical skill development.
- Guide development of research manuscripts.
- Facilitate Nepali participation in international research events, including the American Geophysical Union Fall Meeting.



## Technical Advisory Committee to the Butte County Water Commission

*Butte County, California, USA*

MEMBER (COMMUNITY LEVEL SERVICE)

*Nov. 2019 - PRESENT*

- Review technical materials (e.g. groundwater levels and water quality, precipitation, etc.).
- Provide assistance as needed to the Butte County Water Commission regarding specific questions.

## Journal of Flood Risk Management and Hydrologic Processes

*Various Locations*

REVIEWER (COMMUNITY LEVEL SERVICE)

*May 2019 - PRESENT*

- Peer review of submitted manuscripts.

## Groundwater Dependent Ecosystems Working Group

*Butte County, California, USA*

MEMBER (COMMUNITY LEVEL SERVICE)

*Aug. 2020 - PRESENT*

- Review technical materials (e.g. groundwater levels and water quality, precipitation, etc.).
- Develop collaborative scopes of work and budgets to address data gaps in understanding and managing groundwater dependent ecosystems.

## International Friends Program - California State University, Chico

*Chico, California, USA*

PARTICIPANT (COMMUNITY LEVEL SERVICE)

*Feb. 2020 - PRESENT*

- Facilitating monthly inclusion of student(s) in family dinners, family activities, and external events to ensure that students feel welcome and experience hospitality and friendship during their time in the US.

## California Water Stories and International Forum

*Chico, California, USA*

SPEAKER/PANELIST (COMMUNITY LEVEL SERVICE)

*Nov. 2019*

- Participated in panel discussion of experts at the In Focus Film Festival focused on addressing answers from the crowd about the water films that were screened about (1) the Owens River, (2) Groundwater Depletion in Northern California, and (3) Water Quality Issues in the San Joaquin Valley.
- Presented history of water resources of the Kathmandu Valley, and current research on Closing water knowledge gaps - how young researchers, citizen scientists, and smartphones can help us understand our water.

## Publications

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**Dauids, J.C.**, Devkota, N., Pandey, A., Prajapati, R., Ertis, B.A., Rutten, M.M., Lyon, S.W., Bogaard, T.A. and van de Giesen, N., 2019. Soda bottle science-citizen science monsoon precipitation monitoring in Nepal. *Frontiers in Earth Science*, 7, p.46.

**Dauids, J.C.**, Rutten, M.M., Pandey, A., Devkota, N., Oyen, W.D.V., Prajapati, R. and van de Giesen, N., 2019. Citizen science flow—an assessment of simple streamflow measurement methods. *Hydrology and Earth System Sciences*, 23(2), pp.1045-1065.

**Dauids, J.C.**, 2019. Mobilizing Young Researchers, Citizen Scientists, and Mobile Technology to Close Water Data Gaps - Methods Development and Initial Results in the Kathmandu Valley, Nepal, Delft University of Technology, Netherlands, PhD Dissertation.

**Dauids, J.C.**, Rutten, M.M., Shah, R.D.T., Shah, D.N., Devkota, N., Izeboud, P., Pandey, A. and van de Giesen, N., 2018. Quantifying the connections—linkages between land-use and water in the Kathmandu Valley, Nepal. *Environmental monitoring and assessment*, 190, pp.1-17.

**Dauids, J.C.**, van de Giesen, N. and Rutten, M., 2017. Continuity vs. the crowd—tradeoffs between continuous and intermittent citizen hydrology streamflow observations. *Environmental management*, 60(1), pp.12-29.

**Dauids, J.C.** and Mehl, S.W., 2015. Sustainable capture: Concepts for managing stream-aquifer systems. *Groundwater*, 53(6), pp.851-858.

**Dauids, J.C.**, 2011. Spatial and temporal analysis of stream restoration efforts in depleted aquifer systems, California State University, Chico, USA, Master's Thesis.

## Publications (in review)

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Eisma, J.A., Schoups, G., **Dauids, J.C.**, Giesen, N.V.D., 2020. A Bayesian model for quantifying errors in citizen science data: application to rainfall observations from Nepal, *Water Resources Research*, in review.

Kindermann, P.E., Brouwer, W.S., van Hamel, A., van Haren, M., Verboeket, R.P., Nane, G.F., Lakhe, H., Prajapati, R., (Dauids, J.C.), 2020, Return Level Analysis of the Hanumante River using Structured Expert Judgment: A reconstruction of historical water levels, *Water*, in review.

Prajapati, R., Overkamp, N.N., Moesker, N., Happee, K., van Bentem, R., Danegulu, A., Manandhar, B., Devkota, N., Thapa, A.B., Upadhyay, S., Talchabhadel, R., Thapa, B.R., Malla, R., Pandey, V.P., **Dauids, J.C.**, 2020, Streams, Sewage, and Shallow Groundwater: Stream-Aquifer Interactions in the Kathmandu Valley, Nepal, *Environmental Monitoring and Assessment*, in review.

Prajapati, R., Thapa, B.R., **Dauids, J.C.**, Talchabhadel, R., Kafle, A.S., 2020. Water quality index assessment for groundwater: A case study of Bhaktapur Municipality, Nepal, *Groundwater for Sustainable Development*, in review.

Prajapati, R., Upadhyay, S., Talchabhadel, R., Thapa, B.R., Ertis, B.A., Silwal, P., **Dauids, J.C.**, 2020, Investigating the nexus of groundwater levels, rainfall and land-use in the Kathmandu Valley, Nepal, *Journal of Environmental Management*, in review.

## Conference Proceedings

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**Dauids, J.C.**, Ertis, B.A., Prajapati, R., Upadhyay, S., Saboory, S., Rutten, M.M., Htwe, T.T., SmartPhones4Water: Lessons from Asia, Africa, Europe, North America, and Beyond, American Geophysical Union, Fall Meeting 2020, San Francisco, CA, USA.

Eisma, J.A., Schoups, G., **Dauids, J.C.**, van de Giesen, N., Bayesian quantification of errors in citizen science data: Application to Nepal rainfall observations, American Geophysical Union, Fall Meeting 2020, San Francisco, CA, USA.

Prajapati, R., Talchabhadel, R., Silwal, P., Upadhyay, S., Ertis, B.A., Thapa, B.R., **Dauids, J.C.**, Investigating rainfall variability in the Kathmandu Valley, Nepal, American Geophysical Union, Fall Meeting 2020, San Francisco, CA, USA.

Upadhyay, S., Prajapati, R., Silwal, P., Duwal, S., Lakhe, H., **Dauids, J.C.**, Citizen science, young researchers, and mobile technology: bridging water data gaps in a data and resource-constrained region, American Geophysical Union, Fall Meeting 2020, San Francisco, CA, USA.

Silwal, P., Prajapati, R., Upadhyay, S., Duwal, S., Lakhe, H., **Dauids, J.C.**, Groundwater quality assessment based on the Water Quality Index (WQI): a case study of Bhaktapur Municipality, American Geophysical Union, Fall Meeting 2020, San Francisco, CA, USA.

de Vries, S., Estebanez Camarena, M., van de Giesen, N., ten Veldhuis, M.C., Duah, K., Annor, F., **Dauids, J.C.**, Leveraging Citizen Science for Sustainable Development Education and Water Security in northern Ghana, UNESCO Youth and Water Security in Africa, 2020.

**Dauids, J.C.**, Ertis, B.A., Prajapati, R., Lyon, S., Thapa, A.B., Upadhyay, S., Rutten, M.M., van de Giesen, N., 2020. SmartPhones4Water: lessons from Nepal, Ghana, The Netherlands, and beyond, This Way to Sustainability, Annual Conference 2020, Chico, CA, USA.

**Dauids, J.C.**, Ertis, B.A., Prajapati, R., Lyon, S., Thapa, A.B., Upadhyay, S., Rutten, M.M., van de Giesen, N., 2020. Young researchers, citizen scientists, smartphones, and a pinch of MacGyver: innovative water monitoring in Nepal and beyond, This Way to Sustainability, Annual Conference 2020, Chico, CA, USA.

Talchabhadel, R., Prajapati, R., Thapa, A.B., Nakagawa, H., Kawaike, K., Yamanoi, K., **Dauids, J.C.**, 2020. Citizen Science Can Provide Valuable and Complementary Information in Water Resources Management: A Case Study of Urban Flood Assessment in Hanumante River Basin, Nepal, Disaster Prevention Research Institute Annual Meeting, Kyoto, Japan.

Upadhyay, S., Thapa, A.B., Prajapati, R., Pandey, A., **Dauids, J.C.**, 2019. Land-Water Linkages in the Watersheds of the Kathmandu Valley, Nepal, American Geophysical Union, Fall Meeting 2019, San Francisco, CA, USA.

Prajapati, R., Danegulu, A., Manandhar, B., Upadhyay, S., Thapa, A.B., Talchabhadel, R., **Dauids, J.C.**, 2019. Stream-Aquifer Interactions in the Kathmandu Valley, Nepal, American Geophysical Union, Fall Meeting 2019, San Francisco, CA, USA.

Thapa, A.B., Upadhyay, S., Prajapati, R., **Dauids, J.C.**, 2019. Assessment of Citizen Science Streamflow Measurement Approaches, American Geophysical Union, Fall Meeting 2019, San Francisco, CA, USA.

Kindermann, P., Brouwer, W., Verboeket, R., van Hamel, A., van Haren, M., **Dauids, J.C.**, 2019. Understanding Headwater baseflow Contributions to Overall Water Supplies of the Kathmandu Valley, Nepal, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Kindermann, P., Brouwer, W., Verboeket, R., van Hamel, A., van Haren, M., **Dauids, J.C.**, 2019. Exploring The Possibilities of Using Citizen Science in Flood Risk Analyses, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Talchabhadel, R., Prajapati, R., Thapa, A.B., **Dauids, J.C.**, 2019. Monsoon Rainfall Patterns of 2017-2019 in the Kathmandu Valley, Nepal: An Overview Of Rainfall Monitoring with Citizen Scientists and The Department of Hydrology and Meteorology, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Prajapati, R., Awal, P., Upadhyaya, S., Prajapati, C., **Dauids, J.C.**, 2019. Reviewing The Hiti System: Indigenous Technology in Water Management, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Silwal, P., Prajapati, R., Thapa, A.B., Upadhyay, S., **Dauids, J.C.**, 2019. Groundwater Quality Assessment Using Drinking Water Quality Index (WQI) in Bhaktapur Municipality, Nepal, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Lakhe, H., Upadhyay, S., Thapa, A.B., Prajapati, R., **Dauids, J.C.**, 2019. Observing Our Headwaters: Lessons from Two Years of Community Monitoring of the Upper Bagmati and Nagmati Watersheds, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Duwal, S., Prajapati, R., Thapa, A.B., Upadhyay, S., **Dauids, J.C.**, 2019. Spatio-temporal Fluctuations of Shallow Groundwater Levels in the Kathmandu



Valley, Nepal, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Upadhyay, S., Prajapati, R., Thapa, A.B., **Dauids, J.C.**, 2019. Quantifying the Stories of Stone Spouts in the Kathmandu Valley, Nepal, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Manandhar, B., Danegulu, A., Prajapati, R., Thapa, A.B., **Dauids, J.C.**, 2019. Pre- and Post-Monsoon Stream-Aquifer Interactions in the Kathmandu Valley, Nepal, 4th International Conference on Mountains in a Changing World, Kathmandu, Nepal.

**Dauids, J.C.**, Pandey, A., Prajapati, R., Devkota, N., Rutten, M.M., van de Giesen, N., 2018. Scalable Methods for Citizens to Measure Spring Discharge - a Canary in a Coal Mine for Changing Hydrological Systems, American Geophysical Union, Fall Meeting 2018, Washington D.C.

**Dauids, J.C.**, Pandey, A., Prajapati, R., Devkota, N., Rutten, M.M., van de Giesen, N., 2018. A Recipe for Sustainable Water Data Collection: Young Researchers + Citizen Science + Mobile Technology, American Geophysical Union, Fall Meeting 2018, Washington D.C.

Prajapati, R., Thapa, B.R., Talchabhadel, R., Pandey, A., Devkota, N., **Dauids, J.C.**, 2018. Investigating the Nexus between Rainfall, Land-use, and Groundwater Level in the Kathmandu Valley, Nepal, American Geophysical Union, Fall Meeting 2018, Washington D.C.

Prajapati, R., Devkota, N., Pandey, A., **Dauids, J.C.**, 2018. Exploring the relations between groundwater level, rainfall, and land-use in the Kathmandu Valley, Nepal, 3rd International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Devkota, N., Maharjan, N., Soderlund, T., Hapee, K., Prajapati, R., **Dauids, J.C.**, 2018. Streams, sewage, and shallow groundwater: water quantity and quality interactions in the Kathmandu Valley, Nepal, 3rd International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Pandey, A., **Dauids, J.C.**, 2018. Mapping the springs of the Kathmandu Valley: Can citizens accurately measure spring discharge?, 3rd International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Gyawali, A., Moktan, E., Pandey, A., **Dauids, J.C.**, 2018. Perception vs. Reality: A story of motivating citizen scientists in the Kathmandu Valley, 3rd International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Upadhyay, S., Pandey, A., **Dauids, J.C.**, 2018. Developing ground truth data to enhance land use classification, 3rd International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Talchabhadel, R., Prajapati, R., Devkota, N., Aryal, A., Maharjan, M., Thapa, A.B., **Dauids, J.C.**, 2018. Citizen science in hydrology: A case study of the Kathmandu Valley, Nepal, 3rd International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Overkamp, N., Hapee, K., Bentem, R., Moesker, N., **Dauids, J.C.**, 2018. Post-monsoon stream-aquifer interactions in the Kathmandu Valley, Nepal, 3rd International Conference on Mountains in a Changing World, Kathmandu, Nepal.

Sijapati, S., Khanal, P.R. and **Dauids, J.C.**, 2018. Irrigation Modernization by Enhancing Water Productivity through Water Accounting, 8th International Committee on Irrigation and Drainage (ICID) Asian Regional Conference (8ARC) - Irrigation in Support of Evergreen Revolution, Kathmandu, Nepal.

**Dauids, J.C.**, Rutten, M.M. and van de Giesen, N., 'Can Low Frequency Measurements be Good Enough - A Statistical Assessment of Citizen Hydrology Streamflow Observations,' American Geophysical Union, Fall Meeting 2016, San Francisco, 2016.

**Dauids, J.C.**, van de Giesen, N., and Rutten, M.M., 'Citizen Hydrology - Tradeoffs between Traditional Continuous Approaches and Temporally Discrete Hydrologic Monitoring,' European Geosciences Union General Assembly, Vienna, Austria, 2016.

Mehl, S.W., and **Dauids, J.C.**, 'Groundwater Storage vs. Surface Water Storage - Why Sustainability Requires a Different Management Framework,' American Geophysical Union, Fall Meeting 2015, San Francisco, 2015.

**Dauids, J.C.**, Norris, J., Mehl, S.W., 'Continuity vs. The Crowd - Tradeoffs Between Continuous and Temporally Discrete Hydrologic Observations,' U.S. Committee on Irrigation and Drainage, Sustainable Basin Water Management, Eighth International Conference on Irrigation and Drainage, Reno, NV, 2015.

**Dauids, J.C.** and Mehl, S.W., 'Metrics for Sustainable Groundwater Management,' California Water Environmental Monitoring Forum (CWEMF) Annual Meeting, CA, 2015.

**Dauids, J.C.**, Mehl, S.W., 'Sustainable Capture Fractions, Sustainable Capture Thresholds, Capture Efficiency, and Sustainable Groundwater Storage: Concepts for Managing Stream-Aquifer Systems,' California Groundwater Resource Association Annual Meeting, Sacramento, CA, 2014.

van Overloop, P.J., Maestre, J.M. **Dauids, J.C.**, Hashemy, S.M., Sadowska, A.D., Camacho, E.F., 'Human in the Loop Control of Dez Main Canal,' U.S. Committee on Irrigation and Drainage, Planning, Operation, and Automation of Irrigation Delivery Systems, USCID Water Management Conference, Phoenix, CA, 2014.

**Dauids, J.C.**, Mehl, S.W. and Davids, G.G., 'Sustainable Capture Fractions, Sustainable Capture Thresholds, Capture Efficiency, and Sustainable Groundwater Storage: Concepts for Managing Stream-Aquifer Systems,' U.S. Committee on Irrigation and Drainage, Groundwater Issues and Water Management, USCID Water Management Conference, Sacramento, CA, 2014.

**Dauids, J.C.**, van Overloop, P.J. and Vierstra, M., 'Mobile Monitoring Technologies: The MobileTracker and RemoteTracker,' U.S. Committee on Irrigation and Drainage, Groundwater Issues and Water Management, USCID Water Management Conference, Sacramento, CA, 2014.

**Dauids, J.C.** and Davids, G.G., 'Canaries and Coal Mines: Monitoring Key Indicators of a Heterogeneous Aquifer in the Shasta Valley,' California's Groundwater Future in the Balance, California Groundwater Resource Association Annual Meeting, Sacramento, CA, 2013.

**Dauids, J.C.** and Mehl, S.W., 'Defining Capture Thresholds for Sustainable Groundwater Management of Interconnected Stream-Aquifer Systems,' International Groundwater Modeling Center, MODFLOW and More 2013, Boulder, CO, 2013.

**Dauids, J.C.**, Ertis, B.A., Bair, L.E. and Earley, S.P., "'Spot" Measurements of Flow Can Be "Good Enough" for California's Heightening Agricultural Measurement Requirements,' U.S. Committee on Irrigation and Drainage, Using 21st Century Technology to Better Manage Irrigation Water Supplies, USCID Water Management Conference, Phoenix, AZ, 2013.

**Dauids, J.C.**, Davids, G.G., Bair, L.E. and Miller, E.A., 'Creative, Accurate and Cost-Effective Farm-Gate Delivery Measurement Approaches,' U.S. Committee on Irrigation and Drainage, Managing Irrigation Systems in Today's Environment, USCID Water Management Conference, Reno, NV, 2012.

**Dauids, J.C.** and Thiede, M.V., 'Evaluation of Weir Boxes and Orifice Gates for Farm-Gate Delivery Measurement,' U.S. Committee on Irrigation and Drainage, Managing Irrigation Systems in Today's Environment, USCID Water Management Conference, Reno, NV, 2012.

**Dauids, J.C.**, Davids, G.G. and Bair, L.E., 'Performance of Existing Submerged Orifice Gates for Farm Delivery Measurement in Reclamation District No. 108 Relative to Pending Measurement Accuracy Standards,' U.S. Committee on Irrigation and Drainage, 6th Annual Conference on Irrigation and Drainage, San Diego, CA, 2011.

**Dauids, J.C.**, Davids, G.G. and Loy, K., 'Evaluation of stream-aquifer interactions on the Little Shasta River, CA,' Groundwater Resource Association of California, Groundwater-Surface Water Interactions Symposium, California's Scientific and Legal Disconnect, Sacramento, CA, 2011.

**Dauids, J.C.** and Mehl, S.W., 'Stream Restoration and Aquifer Recovery – A Significant Nexus?,' Groundwater Resource Association of California, Groundwater-Surface Water Interactions Symposium, California's Scientific and Legal Disconnect, Sacramento, CA, 2011.

**Dauids, J.C.** and Mehl, S.W., 'Analysis of stream restoration efforts in depleted aquifer systems,' International Groundwater Modeling Center, MODFLOW and More 2011, Boulder, CO, 2011.

**Dauids, J.C.** and Mehl, S.W., 'The timing, spatial extent and magnitude of fishery benefits obtained from re-watering interconnected stream-aquifer systems depleted by historical diversions and pumping – A case study in the Shasta Valley, CA,' American Geophysical Union, Fall Meeting 2010, San Francisco, 2010.

## Speaking Engagements

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**Dauids, J.C.**, 'SmartPhones4Water-Nepal: Looking Back | Dreaming Forward,' invited speaker for Nepali Young Researchers' Circle, Kathmandu, Nepal, 2020.

**Dauids, J.C.**, 'Remote Sensing and Citizen Science for Water Accounting: Capacity Building Opportunities and Challenges,' invited speaker for UN-FAO Water Productivity, Efficiency, and Sustainability in the NENA Countries, Cairo, Egypt, 2020.

**Dauids, J.C.**, 'Scalable Water Balances from Earth Observations (SWEQ): Theory and Practice (Water Accounting 307\_308),' water resources consultant for the Food and Agriculture Organization of the United Nations (FAO), Nay Pyi Taw, Myanmar, 2020.

**Dauids, J.C.**, 'Scalable Water Balances from Earth Observations (SWEQ): Theory and Practice (Water Accounting 308),' water resources consultant for the Food and Agriculture Organization of the United Nations (FAO), Kabul, Afghanistan, 2019.

**Dauids, J.C.**, 'Expert Consultation on Consumption Based Water Management,' invited speaker and moderator, Chinese Institute for Water Resources and Hydropower Research and UN-FAO, Beijing, China, 2019.

**Dauids, J.C.**, 'Closing water knowledge gaps - how young researchers, citizen scientists, and smartphones can help us understand our water,' invited speaker for the International Forum, California State University, Chico, Chico, CA, USA, 2019.

**Dauids, J.C.**, 'Remote Sensing and GIS in Water Accounting,' Water Accounting 305\_306, water resources consultant for the United Nations Food and Agriculture Organization, Nay Pyi Taw, Myanmar, 2019.

**Dauids, J.C.**, 'California Water Stories,' panelist, California State University, Chico, CA, USA, 2019.

**Dauids, J.C.**, ‘Make Your Data Count,’ invited speaker, Hogeschool Rotterdam Water Management Department, Rotterdam, Netherlands, 2019.

**Dauids, J.C.**, ‘Introduction to Water Accounting,’ Water Accounting 301\_302, water resources consultant for the United Nations Food and Agriculture Organization, Nay Pyi Taw, Myanmar, 2019.

**Dauids, J.C.**, ‘Introduction to Water Accounting Plus (WA+),’ Water Accounting 307, water resources consultant for the International Center for Biosaline Agriculture, Dubai, UAE, 2018.

**Dauids, J.C.**, ‘Data: ‘S4W = Young Researchers + Mobile Technology + Citizen Science,’ invited speaker for WaterMappers’ Summer Challenge, Climate-KIC and Delft University of Technology, Delft, Netherlands, 2018.

**Dauids, J.C.**, ‘Two Years of SmartPhones4Water-Nepal,’ Delft University of Technology Water Management Colloquium, Delft, Netherlands, 2018.

**Dauids, J.C.**, ‘Linkages Between Land-use and Water in the Kathmandu Valley,’ invited speaker for Citizen Science for Sustainable Water Management Workshop, Tribhuvan University Institute of Engineering - Paschimanchal Campus, Pokhara, Nepal, 2018.

**Dauids, J.C.**, ‘SmartPhones4Water-Nepal Citizen Science Flow Campaign,’ invited speaker for Khwopa Engineering College Symposium, Bhaktapur, Nepal, 2018.

**Dauids, J.C.**, ‘Introduction to Water Productivity,’ water resources consultant for the Food and Agriculture Organization of the United Nations (FAO), Kabul, Afghanistan, 2017.

**Dauids, J.C.**, ‘SmartPhones4Water-Nepal: Looking Back and Looking Forward,’ invited speaker for SonTek-A Xylem Brand, Escondido, CA, 2018.

**Dauids, J.C.**, ‘Practical Lessons on Water Accounting,’ water resources consultant for the Food and Agriculture Organization of the United Nations (FAO), Kabul, Afghanistan, 2017.

**Dauids, J.C.**, ‘Basic Training on Water Accounting,’ water resources consultant for the Food and Agriculture Organization of the United Nations (FAO), Kabul, Afghanistan, 2017.

**Dauids, J.C.**, ‘Leveraging Citizen Science and Mobile Technology for Sustainable Water Management,’ Invited Speaker for 8th National Symposium on Groundwater Resources in Nepal, Kathmandu, Nepal, 2017.

**Dauids, J.C.**, ‘SmartPhones4Water - Leveraging Citizen Science and Mobile Technology for Sustainable Water Management,’ Hydrologic Sciences Graduate Group Seminar Series, University of California Davis, Davis, 2017.

**Dauids, J.C.**, ‘SmartPhones4Water - Leveraging Citizen Science and Mobile Technology for Sustainable Water Management,’ Engineers Without Borders Keynote Speaker, California State University San Luis Obispo, San Luis Obispo, 2017.

**Dauids, J.C.**, ‘Citizen Science for Sustainable Water Management,’ Invited Speaker for Conservation Practices and Trends in Nepal, NAMI University, Kathmandu, Nepal, 2016.

**Dauids, J.C.**, ‘Stream-Aquifer Interactions,’ Invited Speaker for Freshwater Biodiversity Monitoring Training, Tribhuvan University Central Department of Environmental Science, Kathmandu, Nepal, 2016.

**Dauids, J.C.**, ‘Groundwater Management in California - A Century of Scientific and Legal Disconnect and the 2014 Sustainable Groundwater Management Act (SGMA),’ Invited Speaker for 7th National Symposium on Groundwater Resources in Nepal, Kathmandu, Nepal, 2016.

**Dauids, J.C.**, ‘Sacramento Valley Groundwater: A Brief Overview,’ Invited Speaker for the Water Education Foundation’s California Groundwater Tour, Chico, CA, 2014.

## News

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### **Dutch Water Sector News: Smartphone helps close water data gaps**

[HTTPS://WWW.DUTCHWATERSECTOR.COM/NEWS/SMARTPHONE-HELPS-CLOSE-WATER-DATA-GAPS](https://www.dutchwatersector.com/news/smartphone-helps-close-water-data-gaps)

*Dutch Water Sector*

*Aug. 2019*

### **TU Delft News: Mobilizing young researchers and citizen scientists to close water data gaps**

[HTTPS://WWW.TUDELFT.NL/EN/2019/TU-DELFT/](https://www.tudelft.nl/en/2019/tu-delft/)

*TU Delft Website*

*Jun. 2019*

[MOBILIZING-YOUNG-RESEARCHERS-AND-CITIZEN-SCIENTISTS-TO-CLOSE-WATER-DATA-GAPS/](#)

## Humans at TU Delft: Jeff Davids, PhD Candidate

[HTTPS://WWW.DELTA.TUDELFT.NL/ARTICLE/HUMANS-TU-DELFT-JEFF-DAVIDS-PHD-CANDIDATE](https://www.delft.tudelft.nl/article/humans-tu-delft-jeff-davids-phd-candidate)

*TU Delft Delta*

Nov. 2018

## I Think I'm Going to Kathmandu: Citizen Science for Freshwater in Nepal

[HTTPS://BLOG.NATURE.ORG/SCIENCE/2018/01/10/KATHMANDU-CITIZEN-SCIENCE-FRESHWATER-PROBLEMS-NEPAL/?UTM\\_SOURCE=CGS&UTM\\_MEDIUM=ARCHIVE&UTM\\_CAMPAIGN=CITIZEN+SCIENCE](https://blog.nature.org/science/2018/01/10/kathmandu-citizen-science-freshwater-problems-nepal/?utm_source=cgs&utm_medium=archive&utm_campaign=citizen+science)

*The Nature Conservancy, Cool Green Science*

Jan. 2018

## Nonprofit Kick-Starts Water Data Gathering in Nepal Valley

[HTTP://WWW.FONDRIEST.COM/NEWS/S4W-NEPAL-KICK-STARTS-WATER-DATA-GATHERING-NEPAL-VALLEY.HTM](http://www.fondriest.com/news/s4w-nepal-kick-starts-water-data-gathering-nepal-valley.htm)

*Environmental Monitor*

Oct. 2017

## In Search of Data

HTTP :

[//FORESTERNETWORK.COM/STORMWATER-MAGAZINE/SW-WATER/SW-STORMWATER-SOFTWARE/IN-PURSUIT-OF-DATA/](http://foresternetwork.com/stormwater-magazine/sw-water/sw-stormwater-software/in-pursuit-of-data/)

*Stormwater*

Sep. 2017

## Three Generations near the Banks of the Bagmati

[HTTP://WWW.ONSETCOMP.COM/RESOURCES/THREE-GENERATIONS-NEAR-BANKS-BAGMATI](http://www.onsetcomp.com/resources/three-generations-near-banks-bagmati)

*Onset Computer Corporation*

Aug. 2017

## SmartPhones4Water

[HTTPS://ISSUU.COM/CALPOLYENGINEERING/DOCS/CAL\\_POLY\\_ENGINEERING\\_FALL-2014\\_/22](https://issuu.com/calpolyengineering/docs/cal_poly_engineering_fall-2014_/22)

*Cal Poly Engineering Advantage*

Oct. 2014

## SmartPhones4Water hopes to fill water management data gaps for developing countries

[HTTP://WWW.FONDRIEST.COM/NEWS/SMARTPHONES4WATER.HTM](http://www.fondriest.com/news/smartphones4water.htm)

*Environmental Monitor*

Nov. 2013

## Water Management App Created

HTTP :

[//WWW.CSUCHICO.EDU/CE/MENU\\_ALUMNI\\_AND\\_FRIENDS/STORIES/2013\\_12-NEWSLETTER/2013\\_12-STORY4.SHTML](http://www.csuchico.edu/ce/menu_alumni_and_friends/stories/2013_12-newsletter/2013_12-story4.shtml)

*Civil Engineering, CSU Chico*

Dec. 2013

## Improving Water Measurement with H2oTech's RemoteTracker

HTTP :

[//WWW.H2OTECHONLINE.COM/WP-CONTENT/UPLOADS/2013/05/IRRIGATION\\_LEADER\\_APRIL-\\_2013\\_RT\\_ONLY.PDF](http://www.h2otechonline.com/wp-content/uploads/2013/05/IRRIGATION_LEADER_APRIL-_2013_RT_ONLY.PDF)

*Irrigation Leader | The Innovators*

Apr. 2013

## Professional Affiliations

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### American Geophysical Union (AGU)

MEMBER

*Washington, D.C., USA*

2009 - Present

### American Society of Civil Engineers (ASCE), National and Feather River Branch

MEMBER

*Reston, VA, USA*

2011 - Present

### Chi Epsilon, International Civil Engineering Honor Society, CSU, Chico Chapter

CHARTER MEMBER

*Arlington, TX, USA*

2020 - Present

## Professional Registrations

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### Professional Civil Engineer (No. 75656)

*State of California*

Jan. 2010