Cian B. Dawson

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Highlight of Qualifications

- Over 20 years of experience as a hydrologist in government, non-profits, and private industry.
- Over 30 years of proven expertise in science communication, training, and technology transfer.
- Demonstrated leadership in hydrogeophysics applied research, development, and testing of drone sensors.
- Skilled in scientific and educational meeting and workshop design, facilitation, and evaluation.
- Experienced educator with a focus on professional development and diversity, equity, and inclusion.

Recent Professional Experience

Lawrence Berkeley National Laboratory

User & Outreach Lead, *Energy Sciences Network (ESnet)*   **2023 to present**

- Provide leadership in planning and building active and engaged user communities for a U.S. Department of Energy (DOE) data networking user facility serving DOE National Labs and other DOE scientific research sites through strategic and timely events, knowledge transfer, and information sharing;
- Coordinate hybrid user conferences and other events for 100+ ESnet network engineering coordinating committee, including staff from all DOE National Labs and other DOE research sites around the U.S.;
- Lead strategic design and implementation of all aspects of ESnet user conference for 180+ in-person or virtual scientists, networking engineers, and program managers;
- Collaborate on assessment of scientific data networking needs of DOE Office of Science Programs, including authoring of associated reports; and
- Conduct inter-departmental strategic planning for coordination and implementation of user engagement.

U.S. Geological Survey

Hydrologist, *Water Resources Mission Area*   **2000 to 2023**

- Provided national leadership on application of drone-mounted sensors for hydrologic studies;
- Lead USGS development and testing of drone-based ground-penetrating radar (GPR) for bathymetry, including collaborations with industry and academic partners and field tests across the Nation;
- Planned, conducted, processed, and analyzed drone-based surveys across the U.S. using a variety of methods including GPR and traditional optical, multispectral, and thermal infrared imaging;
- Provided scientific, technical, and community engagement leadership to multiple Communities of Practice, including coordinating groups on scientific imagery data, drones in hydrology, and observational data;
- Created and facilitated in-person and virtual professional development meetings and workshops on topics including camera-based monitoring, edge computer processing of imagery, and diversity and inclusion;
- Developed online science communication, knowledge transfer, and training content for internal and external audiences, including monthly national groundwater newsletter;
- Chaired newly established internal employee leadership team focused on diversity, equity, inclusion, and accessibility, developing team operational practices and objectives;
- Collaborated on design of enterprise cyberinfrastructure for hydrologic imagery data, with a focus on internal stakeholder engagement and needs assessment;
- Conducted, processed, analyzed, and interpreted surface, borehole, and water-borne geophysical data, including single and multi-method investigations at unconsolidated sediment and fractured rock sites;
- Conducted formal and informal training and technical support on hydrogeophysical methods and tools;
- Responded to public and internal inquiries and information requests on hydrogeology and geophysics;
- Developed multiple internal and public USGS web sites, creating written and multimedia content;
- Co-coordinated national USGS workshops on groundwater, water-quality, and airborne geophysics; and
- Collaborated on development of USGS policies to support FAIR data and open software practices.

Johnson Wright, Inc.   *Lafayette, California*
  Project Hydrologist (Contractor)   **2007 to 2011**

- Evaluated characterization and remediation of contaminated sites across the U.S., synthesizing environmental and regulatory status and potential remaining risks or liabilities through written reports.

Sher Leff LLP   *San Francisco, California*
  Environmental Resource Analyst   **2005 to 2007**

- Provided scientific support and expert witness management in litigation on behalf of public water suppliers and public agencies with contaminated groundwater drinking-water supplies.

Arc Ecology   *San Francisco, California*
  Staff Scientist   **2003 to 2005**

- Provided scientific analysis, public education, and community outreach related to local military site characterization, remediation, and redevelopment for environmental justice organization.

Selected Professional Experience in Teaching & Education

Manager of School Partnerships and Professional Development   **1997 to 2000**
EcoTarium   *Worcester, Massachusetts*

Science Education Specialist   **1995 to 1997**
Office of the Dean of the College, Brown University   *Providence, Rhode Island*

Science Education Specialist   **1995 to 1996**
Massachusetts College of Pharmacy/Allied Health Sciences   *Boston, MA*

Recent Honors & Awards

USGS Honors Award: Unit Award for Excellence of Service for outstanding contributions towards advancing the use of cameras and imagery in water monitoring applications in the USGS (2023)

[USGS Community for Data Integration](#) [Leadership and Innovation Award](#) for leadership and vision through USGS data communities of practice (2023)

[American Geophysical Union 2022 Edward A. Flinn III Award](#) for training and outreach in service to the hydrogeophysics professional community (2022)

USGS STAR award for leadership role in diversity, equity, inclusion, and accessibility work (2022)

USGS STAR award for work on new scientific imagery data storage and persistence cyberinfrastructure and associated stakeholder engagement (2021)

Education

M.S. Geological Sciences (Geophysics), *University of Connecticut, Storrs, Connecticut*

B.S. Geological Sciences, *Brown University, Providence, Rhode Island*

Selected Hydrogeophysics Talks & Information Products

Dawson, C.B., Trost, J.T., and Bekins, B.A., 2023, True color and multispectral imagery data collected by small unoccupied aircraft systems at the USGS National Crude Oil Spill Fate and Natural Attenuation Research Site, Bemidji, Minnesota, June 2018: U.S. Geological Survey data release, https://doi.org/10.5066/P9Z7ZAMW.

Legleiter, C.J., Dille, M., **Dawson, C.B.**, and Kinzel, P.J., 2023, Remotely sensed data from a reach of the Sacramento River near Glenn, California, used to perform Particle Image Velocimetry (PIV) within the Robot Operating System (ROS): U.S. Geological Survey data release, https://doi.org/10.5066/P96BQQQ6.

Mangel, A.R., **Dawson, C.B.**, Rey, D.M., and Briggs, M.B., 2022, Drone applications in hydrogeophysics: Recent examples and a vision for the future: The Leading Edge, vol. 41, no. 8, https://doi.org/10.1190/tle41080540.1.

Dawson, C.B., Lane, J.W., and White, E.A., 2021, Testing of sUAS ground-penetrating radar for non-contact measurement of river bathymetry, *in* Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP), 14 to 19 March 2021, https://doi.org/10.4133/sageep.33-183.

Briggs, M.A., **Dawson, C.B.,** White, E.A., Gazoorian, C.L., Hare, D.K., and Lane, J.W., 2020, Thermal infrared and photogrammetric data collected by drone for hydrogeologic characterization around two U.S. Geological Survey Next Generation Water Observing Systems stream gage locations near Claryville, NY, USA: U.S. Geological Survey data release, https://doi.org/10.5066/P9FIZTPU.

Briggs, M.A., **Dawson, C.B.**, Holmquist-Johnson, C., Williams, K.H., and Lane, J.W., 2019, Efficient hydrogeological characterization of remote stream corridors using drones: Hydrological Processes: Hydrological Processes, vol. 33, no. 2, https://doi.org/10.1002/hyp.13332.

Lane, J.W., **Dawson, C.B.**, White, E.A., and Fulton, J.W., 2019, Non-contact measurement of river bathymetry using sUAS Radar: Recent developments and examples from the Northeastern United States, in Fifth International Conference on Engineering Geophysics (ICEG), October 21-24, 2019, Al Ain, United Arab Emirates Proceedings: Society of Exploration Geophysicists, https://doi.org/10.1190/iceg2019-031.1.

Briggs, M.A., **Dawson, C.B.**, Holmquist-Johnson, C., Adams, J.D., and White, E.A., 2019, Thermal infrared, multispectral, and photogrammetric data collected by drone for hydrogeologic analysis of the East River and Coal Creek beaver-impacted corridors near Crested Butte, Colorado: U.S. Geological Survey data release, https://doi.org/10.5066/P9YWSJ2J.

Dawson, C.B., Holmquist-Johnson, C.L., and Briggs, M.A., 2018, Thermal infrared and photogrammetric data collected by small unoccupied aircraft system for hydrogeologic analysis of Oh-be-joyful Creek, Gunnison National Forest, Colorado, August 2017: U.S. Geological Survey data release, https://doi.org/10.5066/P931G95D.

Dawson, C.B., Day-Lewis, F.D., Lane, J.W., Robinson, J.L, and Slater, L.D., 2017, Borehole Nuclear Magnetic Resonance (NMR): A valuable tool for environmental site management (video): U.S. Geological Survey video, https://doi.org/10.5066/F73J3BW0.

Dawson, C.B., Day-Lewis, F.D., Terry, N.C., Hunt, A.E., Lane, J.W., Robinson, J.L, and Slater, L.D., 2017, Introduction to the USGS Scenario Evaluator for Electrical Resistivity (SEER) Survey Design Tool (video), U.S. Geological Survey video, https://www.usgs.gov/media/videos/usgs-scenario-evaluator-electrical-resistivity-survey-design-tool

Dawson, C.B. and Day-Lewis, F.D., 2016, Introduction to USGS Fractured Rock Geophysical Toolbox Method Selection Tool (video): U.S. Geological Survey video, https://www.usgs.gov/media/videos/usgs-fractured-rock-geophysical-toolbox-method-selection-tool.

Dawson, C.B., 2002, Geophysical investigation and characterization of the Winthrop Landfill southern flow path, Winthrop, Maine: University of Connecticut, unpublished Master's thesis, 104 p.

Johnson, C.D., Kochiss, C.S., and **Dawson, C.B.**, 2005, Use of discrete-zone monitoring systems for hydraulic characterization of a fractured-rock aquifer at the University of Connecticut Landfill, Storrs, Connecticut, 1999 to 2002: U.S. Geological Survey Water-Resources Investigations Report 03-4338, 105p. https://doi.org/10.3133/wri034338.

Johnson, C.D., **Dawson, C.B.**, Belaval, Marcel, and Lane, J.W., Jr., 2002, An integrated surface-geophysical investigation of the University of Connecticut landfill, Storrs, Connecticut — 2000: U.S. Geological Survey Water-Resources Investigations Report 02-4008, 39 p. https://doi.org/10.3133/wri024008

Recent Geoscience Community Service

- American Geophysical Union (AGU)
  - Distributed Sensing Technical Committee, Media Director (2025-present)
  - Near-Surface Section Executive Committee, Member (2021-present)
  - AGU Fall Meeting Session Chair (varied years)
  - American Geophysical Union/Society of Exploration Geophysicists 2019 Airborne Geophysics Workshop: Planning & Support
- Society of Exploration Geophysicists (SEG)
  - Summit on Drone Geophysics Technical Committee (2020-2023)
    - Summit Chair (2023)
    - Session Chair (varied years)
- Environmental and Engineering Geophysical Society (EEGS)
  - Panelist, Picture a Scientist Screening (December 2020)
  - Session Chair, Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP) (varied years)
  - Volunteer for web/online communications support (2002/2003)