

CHANDLER NOYES, PhD
Senior Hydrogeologist



Mr. Noyes has eight years of experience in environmental consulting and academic research fields. In the consulting world, Chandler is adept in the collection of soil, soil vapor, water, and air samples, installation and removal of monitoring wells, conducting Phase I ESAs and vapor intrusion studies, and PCBs building inventories and associated sampling. Through his master's and doctoral research, Chandler has managed several large-scale hydrogeochemical studies in Arizona, Utah, and Saskatchewan (Canada), where his multidisciplinary approach has examined problems such as aquifer connectivity, regional groundwater flow, groundwater resources, and climate change. Chandler has extensive experience in sampling oil, natural gas, and brines, and is an expert in numerous specialty sampling procedures required for isotopes and noble gases. Chandler also has experience working in water quality labs and operating analytical instruments such as Ion Chromatographs and Gran-Alk titrators.

EDUCATION

Ph.D., Hydrology, minor in Environmental Engineering, University of Arizona, AZ, 2023

M.S., Hydrology, University of Arizona, AZ, 2019

B.S., Geology, University of Vermont, VT, 2015

PROFESSIONAL EXPERIENCE

Senior Hydrogeologist, Waite-Heindel Environmental Management (May 2023 – Present)

Project Hydrogeologist, Waite-Heindel Environmental Management (August 2022 – May 2023)

Staff Hydrogeologist, Waite-Heindel Environmental Management (June 2019 – August 2022)

Staff Geologist, Waite-Heindel Environmental Management (June 2015 – August 2017)

QUALIFICATIONS

- Project Management
 - Preparing grants, RFPs (e.g., VT DEC #32509, #39031, #44995), and QAPPs (e.g., EPA RFA #17021, #23040).
 - Budget drafting and implementation, work plans, and monitoring plans.
 - Sensitive receptor and qualitative risk assessment for site remediation.
 - Data management, analysis, and QA/QC and preparation of technical reports.
 - Oversight of subcontractors.
- Phase I and II Environmental Site Assessments
 - Reconnaissance of grounds and facilities to evaluate potential environmental hazards in residential, commercial, and industrial settings.
 - Site Investigation and Conceptual Site Model reporting.
 - Research of historical property ownership and land uses.
 - Preparation of reports in accordance with ASTM E1527-13 Standards.
- Field Work
 - Collection of soil, soil vapor, water, and air samples for variety of contaminants including petroleum, chlorocarbon, PFAS, and PCB related compounds.
 - Installation and removal of piezometers and monitoring wells.
 - Conducting vapor intrusion studies including the installation of vapor points and their subsequent sampling, conceptual designs for sub-slab depressurization systems, and ongoing monitoring.
 - Expertise in in calibrating, using, and troubleshooting a variety of field equipment including, but not limited to: numerous pumps (e.g., peristaltic, submersible, bladder), YSI multi-meters, photoionization detectors, dataloggers, and water level probes.
 - Conducting building inventories to assess potential PCB-containing materials and subsequent sampling.

CHANDLER NOYES, PhD

Senior Hydrogeologist

RESEARCH EXPERIENCE

Master's and Doctoral Research at the University of Arizona

- Research has examined problems such as aquifer connectivity, regional groundwater flow, groundwater resources, and climate change using hydrogeology and geochemistry.
- Expertise in specialty sampling procedures and the operation of equipment for the collection of groundwater, brines, oil, and natural gas for analysis of geochemistry and isotopes.
- Extensive experience working in several water quality labs operating analytical instruments like an Ion Chromatograph and conducting other laboratory procedures such as Gran-Alk titrations.
- Presented findings to the U.S. EPA, Utah Department of Environmental Quality (UDEQ), and Utah Division of Oil, Gas, and Mining (DOG M).
- Invited keynote speaker for the Arizona Hydrological Society's March 2022 monthly meeting.
- Recipient of seven research grants, six scholarships, and three fellowships.
- Recipient of multiple awards for best presentations at research conferences.

Senior Research at the University of Vermont

- Examined mobilization of legacy lead in Burlington soils through synthetic rain waters of varying pH.
- Extensive experience in soil collection and preparation for multi-column flow-through experiments.
- Recipient of Hawley-Mudge award for research.

PROFESSIONAL AFFILIATIONS & CERTIFICATIONS

- OSHA 40 Hour HAZWOPER, June 2015
 - OSHA 8 Hour HAZWOPER Refresher, August 2016 – Present
- Vice Chair – Town of Shelburne Natural Resources & Conservation Committee, September 2020 – Present
- Member – Arizona Hydrological Society

PROFESSIONAL DEVELOPMENT

- Working towards examination for Professional Geologist licensure.
- Ongoing presentations of research at international conferences including the Geological Society of America and the American Geophysical Union annual meetings.
- New England Waste Management Official's Association, *Solidification/Stabilization to Manage PFAS in Soil, Sewage, Sludge, & Landfill Leachate*, Webinar, September 2022.
- New England Waste Management Official's Association, *PFAS Sampling & Analysis Issues*, Webinar, August 2016.

PUBLICATIONS

- Noyes, C., Ferguson, G., Seltzer, A., Ng, J., Tyne, R., Markovich, K., Purtschert, R., Stute, M., Carroll, K., Severinghaus, J., and McIntosh, J. (in preparation for submission to Water Resources Research): *Variations in Groundwater Recharge during the mid-Holocene Revealed in the Tucson Basin using Radioisotopes and Noble Gases*.
- Noyes, C., Dutka, N., Tyne, R., Ferguson, G., Lindsay, M., and McIntosh, J. (in preparation for submission to Hydrogeology Journal): *Isotopes and Noble Gases Identify Both Preservation and Flushing of Pleistocene Groundwaters in Saskatchewan, Canada*.
- Noyes, C., Ferguson, G., and McIntosh, J. (in preparation for submission to Geophysical Research Letters): *Comparison of Groundwater Age Distributions and Hydraulic Response Times in Regional Aquifers*.
- Noyes, C. (2023). *Pleistocene to Holocene Evolution and Connectivity of Groundwater Flow Systems Using Multi-Tracer Approaches* (Doctoral dissertation, The University of Arizona).
- Person, M., Kim, J.-H., McIntosh, J., Noyes, C., Bailey, L., Lingrey, S., Krantz, R., Lucero, D., Reiners, P., and Ferguson, G. (in review GSA Bulletin): *Hydrologic Windows into the Crystalline Basement and Their Controls on Groundwater Flow Patterns Across the Paradox Basin*.
- Ng, J., Tyne, R., Seltzer, A., Noyes, C., McIntosh, J., and Severinghaus, J. (2023). *A new large-volume equilibration method for high-precision measurements of dissolved noble gas stable isotopes*. Rapid Communications in Mass Spectrometry, 37(7):e9471. <https://doi.org/10.1002/rem.9471>
- Kim, J., Bailey, L., Noyes, C., Tyne, R., Ballentine, C., Person, M., Ma, L., Barton, M., Barton, I., Reiners, P., Ferguson, G., and McIntosh, J. (2022). *Hydrogeochemical evolution of formation waters responsible for sandstone bleaching and ore mineralization in the Paradox Basin, Colorado Plateau, USA*. GSA Bulletin 2022; doi: <https://doi.org/10.1130/B36078.1>
- Noyes, C., Kim, J., Person, M., Ma, L., Ferguson, G., and McIntosh, J. (2021). *A geochemical and isotopic assessment of hydraulic connectivity of a stacked aquifer system in the Lisbon Valley, Utah (USA), and critical evaluation of environmental tracers*. Hydrogeology Journal 29: 1905-1923, <https://doi.org/10.1007/s10040-021-02361-9>