Graduate Students Round Nine (first awarded in 2022):

−   **Trenton Franz,** Associate Professor, UNL School of Natural Resources, for the project: *Investigating proximal gamma-ray sensor for soil moisture monitoring*   Student: **Sophia Becker**, Ph.D., Hydrological Sciences

−   **Mary Harner,** Research Professor, UNK Communication and Biology, for the project: *Connecting students to natural history and water resource science*   Student: **Jamila Bajelan**, M.S., Public Communication

−   **Michael Hayes,** Professor, UNL School of Natural Resources, for the project: *The Effects of Economic, Bio-Physical, and Situational Impacts on the Selection of Socio-Hydrological Policy Proposals by Undergraduate Students*   Student: **Lindsay Johnson**, Ph.D., UNL SNR

−   **Aaron Mittelstet**, Assistant Professor, UNL Biological Systems Engineering, for the project: *Vadose Zone Nitrate Accumulation Lower Loup Natural Resources District Area 30, Relation to Manure Application, Fertilizer Management and Groundwater Nitrate Concentrations*   Student: *tbd*

−   **Karina Schoengold,** Associate Professor, UNL Agricultural Economics, for the project: *Assessing Producer Preferences for Conservation Program Participation and Ecosystem Service Provision*   Student: **Kaouter Essakkat**, Ph.D., Agricultural Economics

−   **Harkamal Walia**, Professor, UNL Agronomy & Horticulture, for the project: *Physiological and molecular analysis of combined heat and drought-stress traits in wheat*   Student: **Shohei Oguro**, M.S., Agronomy, Plant Breeding and Genetics

−   **Karrie Weber,** Associate Professor, UNL School of Biological Sciences and Department of Earth and Atmospheric Sciences, for the project: *Nitrate-stimulated uranium biogeochemical cycling in soils and sediments*   Student: **Taylor Rosso**, Ph.D., Biological Sciences

Hubbard Fellowships:

−   **Tsegaye Tadesse,** Research Professor, UNL School of Natural Resources and National Drought Mitigation Center, for the project: *Investigating Complex Drought Impacts on Society and Public Health using Machine Learning* Student: **Beichen Zhang**, Ph.D. Candidate in Natural Resource Sciences/Climate Assessment and Impacts

Research Awards:

−   **Osler Ortez**, Assistant Professor, The Ohio State University Horticulture and Crop Science, for the project: *Addressing corn production issues to enhance productivity and close yield gaps* Postdoctoral Fellow: **Izaias Pinheiro Lisboa**

−   **Martha Rhoades**, Research Manager, Xenobiotics Laboratory, UNL School of Natural Resources, for the project: DWFI Continued Support of Birth Outcomes and Water (BOW) Study, in collaboration with Kent Eskridge, Professor, UNL Statistics and Troy Gilmore, Associate Professor, UNL School of Natural Resources   Student: *tbd*

Graduate Students Round Eight (first awarded in 2021):

−   **Patricio Grassini,** Associate Professor, UNL Agronomy & Horticulture, for the project: *Has irrigated corn in Nebraska reached a yield plateau?*
Student: **Gonzalo Rizzo Ayphassorho**, for a Ph.D. in Agronomy, Minor in Statistics

−   **Erin Haacker,** Assistant Professor, UNL Earth and Atmospheric Sciences, for the project: *Modeling Nitrate Contamination in Northeastern Nebraska*   Student: tbd

- **Javed Iqbal,** Assistant Professor, UNL Agronomy & Horticulture, for the project: *Optimizing Nitrogen and Water Inputs for Corn Based on Nitrate Leaching*
  Student: **Arshdeep Singh**, for a Ph.D. in Agronomy
- **Deepak Keshwani,** Associate Professor, UNL Biological Systems Engineering, for the project: *An integrated framework to account for temporal, spatial, and climate variability in the Corn-Water-Ethanol-Beef (CWEB) nexus system*
  Student: **Heydi Calderon**, for a Ph.D. in Biological Systems Engineering
- **Xu Li, Professor,** Professor, UNL Civil and Environmental Engineering, for the project: *Mitigating the Risk of Manure-Borne Antibiotic Resistance to Surface Water*
  Student: **Qu Wen**, for a Ph.D. in Civil and Environmental Engineering
- **Bijesh Maharjan,** Assistant Professor & Extension Specialist, UNL Agronomy & Horticulture, for the project: *Optimizing Nitrogen Management in Furrow-Irrigated Corn Field to Increase Grain Yield and Ensure Groundwater Quality*   Student: **Deepak Shimire**, for a Ph.D. in Agronomy
- **Amy Schmidt,** Associate Professor, UNL Biological Systems Engineering, for the project: *Integrated Crop Nutrient Management (ICNM) to Support Crop-Human-Environment Well-Being*
  Student: **Maria Josè Oviedo Ventura**, M.S. Biological Systems Engineering, Mechanized Systems Mgt. with a focus on water resources
- **Daniel Uden,** Assistant Professor, UNL School of Natural Resources and Agronomy & Horticulture, Center for Resilience in Agricultural Working Landscapes, for the project: *Remotely sensed early warning of toxic algal blooms in Nebraska lakes* Student: **Mercy Kipenda**, M.S., SNR (Spring 2022)
- **Jessica Fargen Walsh,** Assistant Professor, UNL College of Journalism and Mass Communications, for the project: *A Thematic Analysis of Local News Coverage of Water Issues in Nebraska*
  Student: **Sydney Wilson**, M.S. Music, Music Theory

Hubbard Fellowships:

- **Tirthankar Roy**, Assistant Professor, UNL Civil and Environmental Engineering, for the project: *A comprehensive framework to assess flood risk within the context of public health*
  Student: **Shivendra Srivastava**, Ph.D., Water Resources Engineering

Graduate Students Round Seven (first awarded in 2020):

- **Katie Anania,** Assistant Professor, UNL Art, Art History & Design, for the project: *Visualizing Food and Water Supplies in the U.S. and Latin America through Artists' Projects*
  Student: **Tharius LeBeau**, for a M.A. in Art, Art History & Design
- **Shannon Bartelt-Hunt,** Professor and Dept. Chair, UNL Civil and Environmental Engineering, for the project: *The fate of microplastics in terrestrial systems: understudied sources and citizen science*
  Student: **Nasrin Naderi Beni**, for a Ph.D. in Civil Engineering, specialization in Env. Engineering
- **Andrea Basche**, Assistant Professor, UNL Agronomy & Horticulture, for the project: *The Viability of Cover Crops to Replace In-Season Corn Nitrogen Needs Through Assessment of Imagery and Biomass Decomposition Data*   Student: **Tauana Ferreira de Almeida**, for a Ph.D. in Agronomy
- **Jessica Corman**, Assistant Professor, UNL Agronomy & Horticulture, for the project: Looking to the past to understand the future of freshwater in the Sandhills   Student: **Daniel Gschwentner**, for a Ph.D. Natural Resource Sciences with specialization in Applied Ecology, SNR

- **Daran Rudnick**, Assistant Professor, and **Derek Heeren**, Associate Professor, UNL Biological Systems Engineering, (co-major advisors) for the project: *Development of Research and Demonstration Sites in the BGMA for Groundwater Nitrate Reduction*   Student: **Jiaming (Jamie) Duan**, Ph.D. student in the UNL Biological Systems Engineering Department
- **Elizabeth Van Wormer**, Assistant Professor, UNL School of Natural Resources, for the project: *Linking child stunting, microbiome, livestock health and water quality: a One Health study in Rwanda* Student: **Ben Ndayambaje**, for a Ph.D. Natural Resource Sciences, SNR
- **Haishun Yang**, Associate Professor, UNL Agronomy & Horticulture, for the project: *WaterSmart: A cyberinfrastructure-based integrated agro-geoinformatic decision-support web service system to facilitate informed irrigation decision-making*   Student: **Anthony Amori**, for a Ph.D. in Agronomy

Graduate Students Round Six (first awarded in 2019):

- **Carrick Detweiler**, Assistant Professor, UNL Computer Science and Engineering, and **Francisco Munoz-Arriola**, Associate Professor, UNL Biological Systems Engineering, for the project: *Expansion of Long-term Persistent Monitoring Applications of Tethered UASs*   Student: **Daniel Anthony Rico**, for a Ph.D. in Computer Science and Engineering with a specialization in Computer Engineering
- **Jesse Korus**, Assistant Professor, UNL School of Natural Resources, for the project: *Integrating Hydrologic Modeling and Geophysical Characterization to Improve Water Management Tools* Student: **Nafyad Kawo**, for a Ph.D. in Natural Resource Sciences, Specialization: Hydrological Sciences

Undergraduate (annual awards):

- **Joe Luck**, Associate Professor, UNL Biological Systems Engineering, for the project: *The Analysis of Nitrogen efficiency in non-irrigated corn systems with an in-season sensor-based approach* Student: **Katie Bathke**, UNL Plant Biology

- **Platte Basin Timelapse Project: Teagan Gaul,** Production Intern; **Rachel Holt,** Social Media Intern; **Emma Krab,** Story Production Intern; **Josh Nazarenus,** Timelapse Intern; advised by **Michael Forsberg**, Research Assistant Professor, UNL School of Natural Resources and Producer & Project Manager, **Mariah Lundgren**, UNL School of Natural Resources. While DWFI funds support three interns, the PBT project is leveraging this support in FY23 to support several interns throughout the year. Now retired, Michael Farrell continues to advise and teach students as a Coordinator within UNL SNR, along with graduate assistants and producers.

FY 2022 Students – Status in FY 2023 (Academic year 2022-2023)

DWFI funding ended/opted not to request additional DWFI support:

− **Andrea Basche**, Assistant Professor, and **Daren Redfearn**, Associate Professor, UNL Agronomy & Horticulture, for the project: *Assessing site-specific impacts of cover crops on water cycling using high-resolution imagery and ground based data*   Student: **Fernanda Souza Krupek**, for a Ph.D. in Agronomy (FSK received another fulltime fellowship; AB received approval to transition one year of DWFI support to another student)

− **Jesse Bell**, Professor, UNMC College of Public Health, for the project: *Improving the Knowledge of Drought and Health in the United States*
Student: **Jagadeesh Puvvula**, for a Ph.D. in Environmental Health

− **Bruce Dvorak**, Professor, UNL Civil Engineering & Biological Systems Engineering, for the project: *Environmental sustainability assessment of small Nebraska water resource recovery facilities: water reuse opportunities* Student: **Matt Thompson**, for a Ph.D. in Civil Engineering (Year 2) with specialization in Environmental Engineering

− **Yusong Li**, Associate Professor, UNL Civil Engineering, for the project: *Influence of Climate and Agricultural Clustering on Groundwater Contamination by Trace Organics*
Student: **Chuyang Liu**, for a Ph.D. in Civil Engineering (finishing program using grant funds)

− **Taro Mieno,** Assistant Professor, UNL Agricultural Economics, for the project: *Incorporating machine learning methods in economic analysis of water use in agriculture*
(Sanat Bhandari left UNL due in part to stress from COVID, TM not hiring another student)

− **Francisco Munoz-Arriola**, Associate Professor, UNL Biological Systems Engineering, for the project: *Precision Water Resources Management in Omaha Nation, Nebraska*   Student: **Armando Zarco**, M.S. in Biological Systems Engineering (took a job with Papio-Missouri NRD, completing degree while working full-time)

− **Larkin Powell,** Professor, UNL School of Natural Resources, for the project: *Assessing risk and risk perception of tick-borne disease along a climate-induced transition zone in Nebraska*
Student: **Dominic Cristiano**, M.S., SNR

− **Eleanor Rogan**, Professor, UNMC College of Public Health Department of Environmental, Agricultural & Occupational Health, for the project: *Possible Effects of Nitrate Contaminants in Nebraska Waterways on Human Health* Student: **Balkissa Ouattara**, for a Ph.D. in Public Health

− **Yi Qi**, Assistant Professor, UNL School of Natural Resources, for the project: *Develop scalable methods for identifying Water Use Gap of Farmlands in Midwestern States*
Student: **Wenqi Ou**, for a Ph.D. Natural Resource Sciences, SNR (Year 2) (finishing program using grant funds)

− **Zhenghong Tang**, Professor, UNL College of Architecture, for the project: *Using small Unmanned Aircraft System (UAS) to promote precision conservation and sustainable agricultural practices in the Rainwater Basin, Nebraska*   Student: **Qiao Hu**, for a Ph.D. Natural Resource Sciences, SNR (finishing program using grant funds)

− **Steven Thomas,** Associate Professor, UNL School of Natural Resources, for the project: *Comparing human and veterinary antibiotics in Nebraska streams* Student: **Justin Caniglia**, Ph.D., SNR
(Note: Steven Thomas is leaving UNL – he opted not to sign the FY23 agreement; Justin C. is working with another professor)

Last Updated November 4, 2022

Graduated August 2022:

— **Tiffany Messer**, Adjunct Assistant Professor, UNL School of Natural Resources, and **Daniel Snow**, Research Professor, Nebraska Water Center, for the project: *Treating Non-Point Source Cocktails: Pesticide Removal Utilizing In-stream Best Management Practices* Student: **Josephus Borsuah**, for a Ph.D. in Natural Resource Sciences, SNR

Graduated May 2022:

— **Troy Gilmore**, Assistant Professor of Groundwater Hydrology, UNL School of Natural Resources, for the project: *Influence of recharge patterns on the sustenance of groundwater-fed streams* Student: **Caner Zeyrek**, for a Ph.D. in Natural Resource Sciences, SNR

— **Platte Basin Timelapse Project: Kara Kielty-Connor,** Production Intern, **Favian Mendez Rodriguez,** Production Intern, **Maddie Schiltmeyer,** Social Media Intern

Graduated December 2021:

— **Henry Doku**, with a Ph.D. in Agronomy & Horticulture, Specialization: Plant Breeding & Genetics Advisor: **Harkamal Walia**, Associate Professor, UNL Agronomy & Horticulture, for the project: *Physiological and Molecular Characterization of Nitrogen and Water Stress Responses in Maize*

— **Platte Basin Timelapse Project: Lena Nelson,** News & Events Intern