

Introduction:

Most recently I was the Lohr Endowed Dean of the Jerome J. Lohr College of Engineering at South Dakota State University (SDSU). My work at SDSU included the completion of a \$5M endowment for the dean's position in August of 2021. My leadership in higher education administration as a department head and dean began in 2008, and my teaching and research advanced through the engineering professorate since 1996. International development projects in the Artibonite Valley of Haiti began in 1995, and my international work includes directing an Engineers Without Borders program in Bolivia since 2009, as well as a Fulbright research scholar position for 6 months at Mutah University in Jordan in 2005. My teaching, research, and leadership experience are at both private and public universities.

Education:

- Ph.D.- Environmental Engineering and Hydrogeology, The Ohio State University
- MSCE- Environmental Engineering, Purdue University
- BSCE- Water Resources, The Ohio State University

Academic Experience Narrative:

- **July 2018 to April 2022 – Lohr Endowed Dean of the Jerome J. Lohr College of Engineering, South Dakota State University, Brookings, SD.**

This position was chief academic officer for the Jerome J. Lohr College of Engineering at South Dakota State University (SDSU). The college has approximately 1800 students pursuing AS, BS, MS and PhD degrees in Agriculture and Biosystems, Civil and Environmental, Electrical, and Mechanical Engineering, as well as Math, Statistics, Data Science, Computer Science, Construction and Operations Management, Management of Engineering, and Electrical Engineering Technology. The college had approximately 130 faculty and staff in six different departments. My major focuses during my deanship at SDSU included the following:

- Development and implementation of a strategic plan “crosswalk” along with key performance indicators for five years for all of the departments and the Lohr College of Engineering (COE) to fulfill the university’s new strategic plan. Work was expanded to include an integrated strategic plan and comprehensive campaign tool for developing resources utilizing program advisory boards and dean’s advisory council to develop a successful comprehensive campaign strategy for the Lohr College of Engineering. Completed \$5M gift to endow the Dean of Engineering in August 2021.
- Development of the Lohr COE budget and deep understanding of the current and historic sources and uses of funding to create a plan to stabilize the COE finances over the next five years. The university officially operated in a Resource Centered Management financial model until FY21. University went through a period of funding redirection to accomplish university wide priorities for facilities and programs. COE invested cash reserves either permanently

or in one-time reductions in the central university exceeding \$3M during 2018-2021. Understanding and experience of fiscal management that I provided was crucial to the COE prioritizing funding to meet all commitments and to meet the needs of the central university. Restructured and eliminated \$1.7M of building debt related to COE construction projects from over ten years ago prior to my tenure at SDSU with new external funds. Developed and implemented COE annual budget of approximately \$20M of operating funding generated mostly through tuition and fees and a state allocation. Additionally, responsible for approximately \$6M of annual external research funding.

- Reorganization of the current programs in the COE to increase marketability, workforce development, and student recruiting success. Invested significant effort with each department to identify the programmatic areas that needed reorganized to be financially stable as well as to be modernized to meet the employment needs of the evolving market. Additionally, identified and developed opportunities for differentiation from other benchmarked universities. Hired a new department head for Electrical Engineering and Computer Science in June 2020 and a new head for the Mechanical Engineering and Construction and Operations Management (COM) departments during 2021. Developed a BS in Concrete Industry Management through competitive external \$1.5M in industry funding announced in August 2021.

Developed and received state approval for collaborative PhD in Computer Science with Dakota State University as well as stand-alone PhDs in Mechanical Engineering and Agriculture and Biosystems Engineering.

- Advancement and development of resources. Dedicated substantial time every week working with the SDSU Foundation staff to increase funding for COE initiatives. Raised an average of \$11M annually over a four year period toward a Lohr COE goal of \$50M in a \$425M university comprehensive campaign. Developed initiatives for student scholarship funding program to attract and retain students along with faculty through research funding development. Additionally, developed funding for named professorships and graduate fellowships. Pursued external funding for a new high impact team projects center for the students to be located at university research park integrating established companies, start-ups, faculty and students in a rich entrepreneurial environment
- Forming relationships, applied research, and outreach. Invested considerable time in engagement of alumni, industries, and other universities in development of the surrounding region. Engaged with business leaders to develop more opportunities for faculty and students to be directly involved in funded applied research to solve business challenges in the region. Successfully created four start-up companies in the research park in two

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years. Developed and implemented a long-term strategic goal of doubling research output over ten years for 2018-2028. Developed funding and hired a full time Associate Dean of Research (ADR) and a research grant specialist in June 2020 while implementing a symbiotic strategic plan for research and economic development with the Research Park at SDSU as well as a new vision for research development for the college.

- Accreditation. Joined the national commission of the Engineering Accreditation Commission for the Accreditation Board for Engineering and Technology (ABET) in July 2018. Currently in fifth year of leading accreditation teams to evaluate other universities' programs for accreditation.
- Diversity, Equity and Inclusion (DEI). Collaborated across the university to pursue and complete an APLU Aspire grant. Participated in conducting, analyzing, and synthesizing data from campus climate survey and conducting university focus groups for report and creation of an NSF Advance grant to fund DEI activities and training on campus in 2022.

▪ **July 2013 to June 2018 – Dean, School of Engineering, Fairfield University, Fairfield, CT.**

As the chief academic officer for the School of Engineering, I served on the university's budget and health care committees as well as in leadership positions for strategic planning for the university and the SOE. I had complete responsibility for development and administration of funding for the SOEs annual operational, full time and part-time faculty, scholarships, and restricted funding budgets as well as the economic performance model.

- Reorganization of current programs in the School of Engineering (SOE) to increase student success and work force development. Created and implemented a new BS degree in Bioengineering, relocated the Computer Science program from the College of Arts and Sciences to the SOE, developed multiple 5-year BS/MS options.
- Accreditation. Worked with all the department chairs to help them successfully complete a pending interim accreditation report through ABET upon arrival at Fairfield. Guided the development and implementation of successful sustainable assessment, evaluation and continuous improvement methods and successfully led a complete re-accreditation of all existing programs of study during final year at Fairfield.
- Strategic Planning. Led the development of the School's strategic plan for the next five years as well as the planning and relocation of the SOE to new faculty offices, classrooms, and laboratories in the Bannow Science Center.
- Development. Worked with five different advancement liaisons over a five year period to acquire external funding for development of a new Digital

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Machine Laboratory in 2013, a Materials Characterization laboratory and a Network Systems laboratory in 2014, and an Applied Research Laboratory in 2015. Worked with my faculty to create and implement an externally funded Engineer in Residence Program at Fairfield University beginning in 2016. Raised between \$200K-\$400K each year for support of these specific projects.

- International Engineering and Student Engagement. Worked with SOE students to create a new Engineers Without Borders student chapter and led them first as faculty advisor and then as professional mentor. Led Fairfield students to work collaboratively with the South Dakota State University (SDSU) students to complete additional chlorination and sand filter projects in Bolivia. Served as a professional mentor to the SDSU student chapter of EWB throughout this time. Developed financing for construction of projects in Bolivia from multiple sources including Rotary International, other private foundations, and local corporations.
- Dean's Advisory Council Development. Led the complete reconfiguration of the school's board from an advisory mission to one that was both philanthropic and strategic. Implemented Dean's Board financial support for the dean's initiatives in international work, student competition teams, scholarships to support underrepresented students in engineering, and development of funded applied research for faculty and students. Attended professional leadership development at Chicago Loyola and at Penn State University.
- Student Success. Increased student success in their programs of study along with their career readiness and industry engagement. Established an assistant dean for student success and created a four-year professional development series for the undergraduate students while initiating professional development series for the graduate students through engagement and mentoring activities with company representatives, leaders, and alumni. Students who successfully completed the series received an additional designation on their transcripts which was positively received by employers as a sign of career readiness for new employees.
- Diversity, Equity and Inclusion (DEI). Served on the Presidents Diversity Council and helped develop and implement regular opportunities for faculty and staff to meet and discuss topics and engage with speakers. Collaborated with implementation of campus climate survey. Increased diversity and success of SOE faculty through hiring women and underrepresented faculty.

▪ **August 2008 to July 2013 – Professor and Head of Civil and Environmental Engineering, South Dakota State University, Brookings, South Dakota.**

I was hired as a tenured full professor resulting from a nationwide search to be the Department Head of Civil and Environmental Engineering (CEE) at South Dakota State University (SDSU). This was my first administrative appointment in higher education. During my five years at SDSU, I had complete responsibility for the operating budget of the CEE department, as well as hiring, annual evaluation, promotion and tenure of faculty. Additionally, I managed the departmental discretionary funds, scholarship funds and approximately \$1M annually of sponsored research.

- Laboratory/research development. Successfully developed and acquired two NSF funding proposals (one for laboratory research equipment, and one to collaborate with two other colleges for creating the first two years of a pre-engineering curriculum at Oglala Lakota College, a native American land grant institution in South Dakota), and created external funding for a curriculum development position for the CEE department and an assistant department head.
- Student Engagement/ International. Worked with students to create a nationally recognized Engineers Without Borders student chapter and led multiple student travel teams as faculty advisor and professional mentor in developing feasibility study and construction of a drinking water chlorination system for a remote university in Bolivia.
- Programmatic Accreditation/National. Initiated work as an engineering program evaluator with the Accreditation Board for Engineering and Technology in 2009 and completed annual visits nationwide for evaluation of Civil Engineering programs of study.
- Advancement. Worked with university advancement to develop external funding for facilities, and successfully partnered with the SDSU advancement office to acquire funding for a senior design laboratory (approximately \$250K), as well as two classroom renovation projects (approximately \$50K each).

▪ **August 2003 to August 2008 – Associate Professor of Civil Engineering, Ohio Northern University, Ada, Ohio.**

▪ **August 2000 to August 2003 – Assistant Professor of Civil Engineering, Ohio Northern University, Ada, Ohio.**

I directed a focused part of the Civil Engineering program in Environmental Engineering at Ohio Northern University (ONU). I had complete responsibility for all courses and laboratories in this area including environmental science, wastewater treatment, drinking water treatment, surface water quality, and solid waste management. Concurrently I continued teaching in the areas of Project Management, Engineering Economics, and Surveying.

- Student Engagement in International Work. Involved undergraduate senior design students in project development work for environmental engineering projects in Haiti and completed a 6-month Fulbright research fellowship with my family in Jordan.
- Outreach to Community. Developed and acquired funding to deliver high school science teacher education workshops related to water quality and science education through the Ohio Environmental Protection agency.

▪ **August 1996 to August 2000 - Assistant Professor of Civil and Environmental Engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota.**

In my first academic position at South Dakota School of Mines and Technology (SDSMT), I was hired as an Environmental Engineering Professor but developed and taught multiple class offerings based on my educational and consulting work experience to support the departmental programs in Environmental Engineering, Traffic Engineering, Fluids, Statics, Project Management, Engineering Economics and Surveying. I took my first group of students to work on environmental engineering projects in Haiti in 2000 while at SDSMT.

Professional Registration:

- Registered Professional Engineer- Ohio #49339, South Dakota #6197
- Registered Professional Surveyor- Ohio #6991, South Dakota #6197

Professional Membership:

- American Society for Engineering Education
- American Society of Civil Engineers

Professional Service

- National Academies of Sciences, Engineering and Medicine, Roundtable on Linking Defense Basic Research to Leading Academia Research and Engineering Communities, 2018-2019.
- Accreditation Board for Engineering and Technology, Engineering Accreditation Commissioner, 2018-Present
- ABET Program Evaluator, 2009 - Present
- American Society of Civil Engineers, Region 7 Governor, October 2010 – May 2013.
- American Society of Civil Engineers, National Comm. on Scholarship, Sept. 2007 – 2011.
- South Dakota Water Environment Association, President, Sept. 1999 – Aug. 2000.
- South Dakota Water Environment Association, Vice President, Sept. 1997- Aug. 1999.

International Work History:

1. September 2009 – 2018. Water Supply and Sanitation for Unidad Academica Campesina, Carmen Pampa, Bolivia.
2. March 2011. Village of Les Forges, Water Supply Reservoir Construction, Artibonite Valley, Haiti.

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3. May 2009. Les Forges Water Supply Replacement Plan. Artibonite Valley, Haiti.
4. July 2006. Preparation of Concept Paper for USAID for Development of Water Supply for the Village of Les Forges, Artibonite Valley, Haiti.
5. August 2005. Engineering Feasibility and Economic Evaluation of Water Supply Resources for Hospital Albert Schweitzer and Deschapelles, Haiti, following Hurricane Damage.
6. August 2003. Preliminary Engineering Study for Wastewater Collection and Treatment System, Deschapelles, Haiti.
7. July 2000. Watershed Surface Water Quality and Feasibility Study, Deschapelles, Haiti.
8. August 1998 to April 2000. Engineering Project Management Consultant for Construction of Environmental Systems in Deschapelles, Haiti.
9. August 1997. Funding Proposal for Environmental Systems Rehabilitation in Deschapelles, Haiti. Presented to Swiss Disaster Relief Unit, Bern, Switzerland.
10. March 1996. Environmental Feasibility Study for Hospital Albert Schweitzer, Deschapelles, Haiti. Study performed at request of Grant Foundation, Sarasota, Florida.

Engineering Experience:

- October 1983 to July 2007 – Owner Krocka and Associates and Village Engineering, Ltd., Shelby, Ohio.
 - During this time, which overlapped my PhD studies and the start of my academic career, I was co-owner until 1991, and sole owner 1991-2007 of a small municipal engineering firm in Ohio. The firm varied in size, but had approximately 25 technicians, engineers, and surveyors and specialized in serving small villages and cities that could not afford a full-time engineer on staff. Projects were designed, managed, and implemented for a wide range of municipal projects including the following: water supply, water distribution, sanitary sewerage, stormwater management and sewerage, roads, bridges, water and wastewater treatment. Additionally, the firm was active in land development and land surveying related to private and commercial properties. Further, the firm provided environmental analysis, as well as grant development and management related to state and federal funding and commercial development for land transfer and development.

Professional Development:

- CASE Conference for Development of Deans and Academic Leaders, February 2021.
- Engineering Development Foundation Conference, San Diego, CA, June 2019.
- CASE Conference for Development for Deans and Academic Leaders, Sanibel, FL, November 2018.
- Academic Leadership Academy, Penn State University, June 2016.
- AJCU Higher Education Leadership Conference, Loyola Chicago University, June 2014.
- American Society of Civil Engineers, Fellow, May 2011.

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- American Society of Civil Engineers, National Certificate of Commendation for Outstanding Faculty Advisor to Student Chapter, 2008.
- American Society of Civil Engineers, Toledo Section, Engineer of the Year, 2006.
- Fulbright Research Scholar, Mutah University, Karak, Jordan, 2005.
- American Society for Engineering Education, Environmental Engineering Division, Best Paper for 2002, ASEE National Conference, Nashville, TN, June 2003.

Refereed Papers:

- Ziadat, A.H., Jiries, A. G., Berdanier, B.W., and Batarseh, M. I., (2015), "Bio-monitoring of Heavy Metals at the Vicinity of Copper Mining Site in Erdenet, Mongolia," *Journal of Applied Sciences*, DOI: 10.3923/jas.2015.
- Kant, J.A., Larson, G.E., Burckhard, S.R., Berdanier, B.W., and Meyers, R.T., (2015) "Contemporary Use of Wild Fruits by the Lakota in South Dakota: Implications to Cultural Identity," *Great Plains Research Journal*, 25(1), 13-24.
- Ande, S., Berdanier, B.W., and Ramakrishnan, V., (2013), "Surface Morphology of Reactive Powder Concrete Containing Soil," *Journal of Environmental Science and Engineering*, 2(4), 250-255.
- Bielefeldt, A.R., Dewoolkar, M.M., Caves, K.M., Berdanier, B.W., Paterson, K.G., (2011), "Diverse Models for Incorporating Service Projects into Engineering Capstone Design Courses," *International Journal of Engineering Education*, 27(6), 1206-1220.
- Ande, S., Berdanier, B.W., and Ramakrishnan, V., (2011), "Performance of Reactive Powder Concrete Containing Arsenic," *Journal of Water Resource and Protection*, 3(5), 335-340, doi:10.4236/jwarp.2011.35042.
- Sundareshwar, P.V., Upadhayay, S., Abessa, M., Honomichl, S., Berdanier, B.W., Spaulding, S.A., Sandvik, C., and Trennepohl, A., (2011), "The Paradox of Algal Blooms in Oligotrophic Waters," *Geophysical Research Letters*, Vol. 38, L10405, doi:10.1029/2010GL046599.
- Berdanier, B.W., Ziadat, A.H., and Jiries, A. G., (2010), "Simplified Integrated Design for Fixed Film Biological Nutrient Removal," *Journal of Applied Sciences*, 10(19) 2283-2289.
- Ziadat, A.H., Hamarneh, R.Z., and Berdanier, B.W., (2010), "Assessment of the Use of Household Chemicals in Al-Karak Governate, Jordan," *Research Journal of Environmental Sciences*, 4(6), 549-557.
- Berdanier, B.W., Batarseh, M.I., Jiries, A.G., and Ziadat, A.H., (2009), Lichen, *Punctilia rudenta*, as Bioindicators for Air Pollution in Ohio, USA," in The Role of Ecological Chemistry in Pollution Research and Sustainable Development, Eds. Bahadir, A.M., and Duca, G., 149-156.
- Tinant, C.J., Giraud, G., Berdanier, B.W., Belile, D., Wilford, D., Gaddie, H., (2009), "Offsite Impacts of Erdenet Copper Molybdenum Mine Tailings, North Central Mongolia," *First Annual Conference on Mining and the Environment, Erdenet, Mongolia*.
- Tinant, C.J., Berdanier, B.W., Belile, D., Wilford, D., Gaddie, H., Hansen, M.R., (2009), "Preliminary Water Quality Results for the Erdenet-Khangal River Near Erdenet Copper Molybdenum Mine in North Central Mongolia," *First Annual Conference on Mining and the Environment, Erdenet, Mongolia*.

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- Jiries, A. G., Batarseh, M. I., El-Hassen, T., Ziadat, A. H., El-Naser, F., and Berdanier, B. W., (2008), "Lichens (*Rhizocarpon geographicum*) as Biomonitor for Atmospheric Pollution in Amman City, Jordan." *Environmental Bioindicators*, 3(2)106-113.
- Batarseh, M., Ziadat, A., Alawi, M., Berdanier, B.W., and Jiries, A., (2008). "The Use of Cypress Tree Bark as an Environmental Indicator of Heavy Metals Deposition in Fuheis City, Jordan", *International Journal of Environment and Pollution*, 33(2/3), 207-217.
- Dawadi, S., Ramakrishnan, V, and Berdanier, B.W., (2006). "Surface Morphology of Reactive Powder Concrete Containing Arsenic," *Proceedings 28th Conference of Cement Microscopy*, Denver, CO, 205 – 226.
- El-Hasan, T., Batarseh, M., Al-Omari, H., Ziadat, A., Jiries, A., Elali, A., Al-Naser, F., and Berdanier, B.W., (2006). "The Distribution of Heavy Metals in Urban Street Dusts of Karak City, Jordan." *Soil and Sediment Contamination*, 15(4): 357 – 365.
- Ziadat, A.H., Batarseh, M, El-Hasan, T., Berdanier, B.W., Jiries, A., (2006). "Chemical and Mineralogical Characteristics of Dry Deposition in the Surrounding of a Cement Factory in Jordan." *Environmental Forensics*, 7(2): 169 – 174.
- Berdanier, B.W., Ziadat, A.H., (2006). "Evaluation of a Total Dissolved Solids Model in Comparison to Actual Field Data Measurements in the Cheyenne River, South Dakota, U.S.A." *Environmental Monitoring and Assessment*, 117: 335 -344.
- Ziadat, A.H., Berdanier, B.W., (2004), "Stream Depth Significance During In-situ Sediment Oxygen Demand Measurements in Shallow Streams," *Journal American Water Resources Association*, 631-638, June.
- Dawadi, S., and Hansen, M.R. Berdanier, B.W., (2004), "Encapsulation of Contaminated Soil in Concrete Mortar," *Materials Journal, American Concrete Institute*, 101(5), 347-352.
- R.W. Peters, T.J. Walker, Y. Ku, B.W. Berdanier, T.K. Chang, and D. Freund, (1983) "Physical and Chemical Methods," *J. Water Pollution Control Federation*, 55, 600-612.

Technical Reports:

- Berdanier, B.W., Craft, L., "Rapid Creek Watershed Water Quality Assessment," State Agency Report prepared for West Dakota Water Development District, Rapid City, South Dakota, (June 1997).
- Bair, E.S., Safreed, C.A., and Berdanier, B.W., "CAPZONE - An Analytical Flow Model for Simulating Confined, Leaky Confined, or Unconfined Flow to Wells with Superposition of Regional Water Levels." User's Manual prepared for Ohio EPA, Dept. of Geological Sciences, The Ohio State University, Columbus, Ohio, 1991.

General Publications:

- Berdanier, B.W., "Wastewater Treatment at Ellsworth AFB", *Become Informed*, Vol. 2, Issue 10, (December, 1999).
- Berdanier, B.W., "Project Management is in the Details", *Civil Engineering*, p.96, (September, 1999).
- Berdanier, B.W., "Treatment of Ground Water and Soil Vapor at Ellsworth", *Become Informed*, Vol. 1, Issue 9, (September, 1999).

Conference Papers/Presentations:

- Berdanier, B.W., (2018), "Engineering in a Fragile World," Advances in Science & Engineering Technology (ASET) International Multi Conference, Keynote Address for Sustainable Environment and Urban Infrastructure Conference, Dubai, UAE.
- Fick, D., Berdanier, B.W., Sawyer, J.F., and Tinant, C.J., (2012), "Civil and Geological Engineering Service-Learning Projects as Part of a Pre-Engineering Education Collaborative," 2012 Frontiers in Education Conference, Seattle, WA, Oct.3-6, 2012.
- Berdanier, B.W., Pallett, B., and Gross, A., (2012), "Idea Feedback Systems for Department Chairs and Administrators," Higher Learning Commission Conference, Chicago, IL.
- Berdanier, B.W., (2010), "Year-Long Service Learning Projects in Capstone Design at South Dakota State University," Capstone Design Conference, Boulder, CO, June 7-9.
- Tinant, C.J., Berdanier, B.W., Belile, D, Gaddie, H, and Hansen, M.R., (2010), "Environmental Impacts of the Erdenet Copper Molybdenum Mine in North Central Mongolia," Geological Society of America Regional Meeting, Rapid City, SD, April 22.
- Berdanier, B.W., Stephens, B., Krantz, E., Lambert, J., Johnson, K., Schoen, E., Tinant, C.J., (2009), "Reflections on a Decade of International Service Learning," ASEE North Midwest Conference, Marquette University, Milwaukee, WI.
- Tinant, J.C., Berdanier, B.W., Gaddie, H., Belile, D., Giraud, G., Wilford, D., Hansen, M.R., (2009), "Air and Water Quality Analyses for Khangal River Near Erdenet Copper Molybdenum Mine," 2009 South Dakota GIS Conference, Fort Pierre, SD.
- Berdanier, B.W., and Sundareshwar, P.V., "Response of *Didymosphenia geminata* to Nutrient Dosing in an Oligotrophic Stream," American Water Resources Conference, Nashville, TN (November, 2008).
- Maurer, K, Berdanier, B.W., and Sundareshwar, P.V., "Investigation of Phosphorus Uptake Capability in the Diatom, *Didymosphenia geminata*," North Central Section ASEE Conference, Wright State University, Dayton, Ohio (April, 2008).
- Cholewa, K., Drury, T., Smith, K., and Berdanier, B.W., "Investigation of Differences in Solid Waste Management Practices Related to Population and Location," North Central Section ASEE Conference, Wright State University, Dayton, Ohio (April, 2008).
- Berdanier, B.W., "Water Resources Evaluation Following Natural Disaster in Haiti," ASEE Annual Conference, Chicago, IL. (June 2006).
- Berdanier, B.W., "Student Generated Real-Time Note Development and Web Page Archival," ASEE Annual Conference, Chicago, IL. (June 2006).
- Berdanier, B.W., Ziadat, A.H., (2005). "Preliminary Investigation of an Oil Contaminated Watershed." CASE Environmental Symposium, Princess Soumaya Technical University, Amman, Jordan (March, 2005).
- Berdanier, B.W., "Watershed Analysis and Teacher Education Resource (WATER) Project," ASEE Annual Conference, Nashville, Tn. (June, 2003).
- Berdanier, B.W., Heckler, D., Glover, A. "Simplified Integrated Design for Fixed Film Biological Nutrient Removal (FFBNR)," North Central Section ASEE Conference, Columbus, Ohio (April, 2003).

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- Berdanier, B.W., "Presentation of Construction Management Topics in a Competitive Bid Module," ASEE Annual Conference, Montreal, Quebec, (June, 2002).
- Berdanier, B.W., "Use of Watersheds and the TMDL Process as Tools for Curriculum Development and the Introduction of Research Concepts in an Undergraduate Environmental Engineering Course," ASEE Annual Conference, Montreal, Quebec, (June, 2002).
- Berdanier, B.W., "Oglala Sioux Tribe, Cheyenne River Water Quality Assessment and TMDL Development", ASCE Joint Conference on Water Resources Engineering and Water Resources Planning and Management, Minneapolis, Mn. (July, 2000).
- Berdanier, B.W., Ziadat, A., Peacock, M., and Hanna, I., "The CRCC Native American Natural Resource Management Initiative", ASCE Joint Conference on Water Resources Engineering and Water Resources Planning and Management, Minneapolis, Mn. (July, 2000).
- Berdanier, B.W., Ziadat, A., Kenner, S., and Galloway, J., "Lower Rapid Creek Watershed Assessment and TMDL Development", ASCE Joint Conference on Water Resources Engineering and Water Resources Planning and Management, Minneapolis, Mn. (July, 2000).
- Berdanier, B.W., "Environmental Systems Construction in Deschappelles, Haiti", Proceedings ASCE Water Resources Planning and Management Conference, Tempe, Az. (June, 1999).
- Berdanier, B.W., "Environmental Systems Rehabilitation in Deschappelles, Haiti", ASCE Water Resources and the Urban Environment Conference, Chicago, IL. (June, 1998).
- Berdanier, B.W., "Progress on Developing Articulation Agreements with Tribal Colleges for Engineering Curricula", ASEE Rocky Mountain Section Conference, Denver Co., (April 1998).
- Berdanier, B.W., "Integrated Approach to the Study of an Alluvial Aquifer and Watershed." American Water Resources Association Summer Symposium, Keystone, Co., (June 1997).
- Berdanier, B.W., "Biosorption of 1,2,3 - Trichloropropane and Trichloroethylene by the Diatom *Thalassiosira pseudonana*," Proceedings of the 50th Industrial Waste Conference, Purdue University, West Lafayette, Indiana, (1995).

Research Grant History:

1. September 2010, National Science Foundation, "Collaborative Research: OLC/SDSU/SDSMT Pre-Engineering Education Collaborative," \$825,000.
2. March 2010, Berdanier, B.W., and Clay, S.A., USGS 104B, "Measurement of Human Pharmaceutical Compounds (HPC) in Surface Water," \$5,367.
3. September 2009, Berdanier, B.W., and DeBoer, D., National Science Foundation, "Acquisition of Inductively Coupled Plasma – Optical Emission Spectrometer," \$118,944.
4. October 2008, USDA-CSREES, "Development of Analytical Capabilities for the Examination of Treatment Potential of Human Pharmaceutical Compounds in a Municipal Wastewater Treatment Plant," \$20,000.
5. March 2008, National Science Foundation, "Multi-National Team Planning Visit to Mongolia," \$29,664.

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6. July 2007, Sundareshwar, P.V., and Berdanier, B.W., National Science Foundation, SGER: An Opportunity to Study the Impact of Nutrient Pulsing in an Oligotrophic Forest Stream in South Dakota, \$75,000.
7. October 2005, Ohio Environmental Protection Agency, Section 319(H) Nonpoint Source Program, Blanchard Watershed Multiple Facility SWAP Project, Village of Ottawa Educational Outreach, \$21,575.
8. February 2005, Fulbright Scholar Award, Water Quality Research Project, Mutah University, Karak, Jordan, \$25,000.
9. June 2003, Preparation of Journal Article for FFBNR Research, Ohio State University Research Foundation, \$3,000.
10. April 2003, RCRA Hazardous Waste Training at Univ. of Findlay, ONU Summer Faculty Development Grant, \$1,000.
11. January 2003, Field Sampling and Laboratory Analysis for Development and Verification of Design Models, HANCOR, Co PI with Dr. Robert Ward, \$7,200.
12. September 2002, Evaluation of Simplified Integrated Design for FFBNR, Ohio State University Research Foundation, Grant Extension, \$65,000.
13. August 2002, Watershed Analysis and Teacher Education Resource (WATER) Project, Foundation for Independent Higher Education (FIHE) and ATT Technology Grant, \$50,000.
14. April 2001, Evaluation of Simplified Integrated Design for Fixed Film Biological Nutrient Removal, ONU Summer Faculty Development Grant, \$1,500.
15. April 2001, Evaluation of Simplified Integrated Design for Fixed Film Biological Nutrient Removal, USGS Department of the Interior, State Water Resources Research Institute Program, \$73,500.
16. November 2000, Heavy Construction Systems Specialists, Inc., Software Grant to Fund the Purchase of 25 Seats of Project Bidding Software, \$113,900.
17. March 2000, Rotary International Foundation, Watershed Surface Water Quality Study and Feasibility Study for Hospital Albert Schweitzer; Deschappelles, Haiti; and St. Marc, Haiti, \$6,000.
18. October 1999, Research and Hydrologic Analysis in South Dakota, United States Geological Survey, \$359,056.
19. May 1999, Co-PI, Methodology for Wellhead Protection, Upper Sioux Tribe, Royal Rivers Technology, \$29,000.
20. May 1999, Co-PI, Evaluation of Soil Solidification Process as a Remedial Alternative and for Structural Strength, Nelson Research Grant, \$5,000.
21. April 1999, Summer Institute in Water and Wastewater Treatment Technology, ASCE National Committee on Diversity and Career Guidance, \$4,000.
22. March 1999, Contaminant Inventory for Western Pennington County, West Dakota Water Development District, \$8,000.
23. January 1999, GPS/GIS for On-Site Treatment Systems, City of Rapid City and West Dakota Water Development District, \$13,684.
24. October 1998, Primavera Systems, Software Grant to Fund the Purchase of 30 Seats of Project Management Software, \$12,400.
25. May 1998, NSF EPSCoR Additional Support for Research Funding, \$3,000.
26. October 1997, Remote Researcher, Enhanced Access to Guided Learning Environment (EAGLE), Four-year research grant funded by the Kellogg Foundation.

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27. September 1997, Co-PI NASA Center of Excellence in Remote Sensing at South Dakota School of Mines and Technology, Rapid City, SD., \$89,000.
28. August 1997, Research Grant from South Dakota Space Grant Consortium for Research at EROS Data Center, Sioux Falls, SD. Research Topic: Remote Sensing and GIS in Environmental Monitoring, \$5,000.
29. SDSMT 1997 Technology Fee Award, Grant: Laboratory Equipment Upgrade for Environmental Water Quality Laboratory; \$2,500.
30. November 1996, Research Grant from West Dakota Water Development District. Research Topic: Rapid Creek Water Quality Assessment, \$6,000.
31. November 1996, Research Grant from South Dakota Reinvestment Funds. Research Topic: Development of a Statewide Electronic Data Base and Seminar Curriculum for Foundation Funding, \$6,000.
32. July 1996, Research Grant from Nelson Research Awards Fund. Research Topic: Modeling of Subsurface Flow in an Alluvial Aquifer Using a Finite Difference Flow Model with an Integrated GIS Interface, \$5,000.
33. January 1993, Research Grant from Ciba-Geigy Corporation. General Research Area: Transport of substrates and nutrients in support of the development of in-situ biological soil remediation technologies, \$20,000.
34. October 1992, Graduate Student Alumni Research Award, The Ohio State University. Proposal Title: Evaluation of SOC Removal Using Activated Carbon, \$1,500.